Appendix I
Section 404 Coordination

The following documents pertain to Section 404 coordination and include the Clean Water Act Section 404 Wetland Permit Application, a US Army Corps of Engineers (USACE) coordination letter, and notes from USACE and Technical Evaluation Panel (TEP) coordination meetings.

I.1 Section 404 Wetland Permit Application

1. Metropolitan Council, BLRT Extension Project Wetland Permit Application, May 2016. Available at http://metrocouncil.org/blrt/feis

I.2 Coordination with US Army Corps of Engineers

1. Letter from USACE to the Federal Transit Administration concurring on Point 4 (Design Phase Impact Minimization), June 16, 2016

I.3 USACE and TEP Coordination Meeting Notes

1. USACE coordination meeting notes, March 26, 2015
2. TEP coordination meeting notes, May 19, 2015
3. TEP coordination meeting notes, December 8, 2015

Agency coordination letters prior to 2015 can be found in the Bottineau Transitway Draft EIS at this website link:

metrocouncil.org/Transportation/Projects/Current-Projects/METRO-Blue-Line-Extension/Publications-And-Resources/Environmental/DEIS/BLLRT_DEIS_App-D_AgencyCoordination.aspx

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Appendix I
Section 404 Coordination

I.1 Section 404 Wetland Permit Application

1. Metropolitan Council, BLRT Extension Project Wetland Permit Application, May 2016

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METRO Blue Line Extension Project

Wetland Permit Application

May 2016

METROPOLITAN COUNCIL

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PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name: Peter DeMuth, P.E., Civil/ Utilities Engineering Lead, Metropolitan Council
Mailing Address: Blue Line Extension LRT Project Office, 5514 W. Broadway Ave, Suite 200, Crystal, MN 55428
Phone: 612 373 5308
E-mail Address: Peter.demuth@metrotransit.org

Authorized Contact (do not complete if same as above): Jeffrey W. Olson, SEH, Inc.
Mailing Address: 3535 Vadnais Center Drive, St. Paul, MN 55110 - 5196
Phone: 612 598 4254
E-mail Address: jolson@sehinc.com

Agent Name: Jeffrey W. Olson
Mailing Address: 3535 Vadnais Center Drive, St. Paul, MN 55110 - 5196
Phone: 612 598 4254
E-mail Address: jolson@sehinc.com

PART TWO: Site Location Information

County: Hennepin **City/Township: Brooklyn Park, Robbinsdale, Crystal, Golden Valley, Minneapolis**

Parcel ID and/or Address: Linear project (various)

Legal Description (Section, Township, Range):
T120N R21W (Sections 31 and 32)
T119 N R21W (Sections 5, 17,8,20,29,30,32)
T118N R21W (Sections 5,4,9)
T29N R24W (Sections6,7,18,17)
T118N R24W (Sections 17,20,21,22)

Lat/Long (decimal degrees): 45.020545, -93.332826

Attach a map showing the location of the site in relation to local streets, roads, highways. See attached location map.

Approximate size of site (acres) or if a linear project, length (feet): ~13 miles in length

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform_4345_2012oct.pdf

PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted ***prior to*** this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

See narrative attached to this permit application form.

PART FOUR: Aquatic Resource Impact[1] Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

Aquatic Resource ID (as noted on overhead view)	**Aquatic Resource Type** (wetland, lake, tributary etc.)	**Type of Impact** (fill, excavate, drain, or remove vegetation)	**Duration of Impact** Permanent (P) or Temporary (T)[1]	**Size of Impact**[2]	**Overall Size of Aquatic Resource** [3]	**Existing Plant Community Type(s)** in Impact Area[4]	**County, Major Watershed #, and Bank Service Area #** of Impact Area[5]
See narrative attached to this permit application form							

[1]If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T (220)".
[2]Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).
[3]This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".
[4]Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.
[5]Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

None.

PART FIVE: Applicant Signature

☐ Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature: _____ Date: 5/16/16

I hereby authorize Jeffrey W. Olson to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

_____

[1] The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

Attachment A
Request for Delineation Review, Wetland Type Determination, or Jurisdictional Determination

By submission of the enclosed wetland delineation report, I am requesting that the U.S. Army Corps of Engineers, St. Paul District (Corps) and/or the Wetland Conservation Act Local Government Unit (LGU) provide me with the following (check all that apply):

☐ **Wetland Type Confirmation**

☐ **Delineation Concurrence**. Concurrence with a delineation is a written notification from the Corps and a decision from the LGU concurring, not concurring, or commenting on the boundaries of the aquatic resources delineated on the property. Delineation concurrences are generally valid for five years unless site conditions change. Under this request alone, the Corps will not address the jurisdictional status of the aquatic resources on the property, only the boundaries of the resources within the review area (including wetlands, tributaries, lakes, etc.).

☐ **Preliminary Jurisdictional Determination**. A preliminary jurisdictional determination (PJD) is a non-binding written indication from the Corps that waters, including wetlands, identified on a parcel may be waters of the United States. For purposes of computation of impacts and compensatory mitigation requirements, a permit decision made on the basis of a PJD will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. PJDs are advisory in nature and may not be appealed.

☐ **Approved Jurisdictional Determination**. An approved jurisdictional determination (AJD) is an official Corps determination that jurisdictional waters of the United States are either present or absent on the property. AJDs can generally be relied upon by the affected party for five years. An AJD may be appealed through the Corps administrative appeal process.

In order for the Corps and LGU to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the *Guidelines for Submitting Wetland Delineations in Minnesota* (2013).
http://www.mvp.usace.army.mil/Missions/Regulatory/DelineationJDGuidance.aspx

Attachment B
Supporting Information for Applications Involving Exemptions, No Loss Determinations, and Activities Not Requiring Mitigation

Complete this part ***if*** you maintain that the identified aquatic resource impacts in Part Four do not require wetland replacement/compensatory mitigation OR ***if*** you are seeking verification that the proposed water resource impacts are either exempt from replacement or are not under CWA/WCA jurisdiction.

Identify the specific exemption or no-loss provision for which you believe your project or site qualifies:

The Council asserts that several delineated basins within the proposed BLRT Extension project area are outside of the scope of the Wetland Conservation Act (WCA) and would therefore not be regulated per WCA. Some of these basins were constructed in uplands for the sole purpose of the storage or conveyance of stormwater. Other basins are part of the permitted (if after 1991 WCA enactment) stormwater management infrastructure. Relevant WCA LGUs within the project area have reviewed and commented on the "***Technical Memorandum: Jurisdictional Issues Associated with Delineated Basins; Blue Line Extension LRT***" which summarizes jurisdictional assertions. Data in the narrative attached to this permit application form incorporate the WCA LGU findings. Additionally, the USACE has reviewed this **Technical Memorandum** and concluded which basins within the project area are Likely Jurisdictional Waters and Streams, Non-Waters of the US (non-WOUS), and Isolated Basins. Data in the attached narrative incorporates the USACE findings concerning jurisdiction.

Per WCA, some excavation (cut) impacts within Type 1 or Type 2 basins within the project would not require mitigation; specifically those that are not USACE jurisdictional.

Provide a detailed explanation of how your project or site qualifies for the above. Be specific and provide and refer to attachments and exhibits that support your contention. Applicants should refer to rules (e.g. WCA rules), guidance documents (e.g. BWSR guidance, Corps guidance letters/public notices), and permit conditions (e.g. Corps General Permit conditions) to determine the necessary information to support the application. Applicants are strongly encouraged to contact the WCA LGU and Corps Project Manager prior to submitting an application if they are unsure of what type of information to provide:

The "***Technical Memorandum: Jurisdictional Issues Associated with Delineated Basins; Blue Line Extension LRT***" summarizes assertions concerning jurisdiction of basins within the proposed BLRT Extension project area. The narrative (See Table 6 in narrative) that accompanies this permit application form incorporates the findings of the relevant WCA LGUs and the USACE concerning jurisdiction.

Attachment C
Avoidance and Minimization

Project Purpose, Need, and Requirements. Clearly state the purpose of your project and need for your project. Also include a description of any specific requirements of the project as they relate to project location, project footprint, water management, and any other applicable requirements. Attach an overhead plan sheet showing all relevant features of the project (buildings, roads, etc.), aquatic resource features (impact areas noted) and construction details (grading plans, storm water management plans, etc.), referencing these as necessary:

See attached narrative.

Avoidance. Both the CWA and the WCA require that impacts to aquatic resources be avoided if practicable alternatives exist. Clearly describe all on-site measures considered to avoid impacts to aquatic resources and discuss at least two project alternatives that avoid all impacts to aquatic resources on the site. These alternatives may include alternative site plans, alternate sites, and/or not doing the project. Alternatives should be feasible and prudent (see MN Rules 8420.0520 Subp. 2 C). Applicants are encouraged to attach drawings and plans to support their analysis:

See attached narrative.

Minimization. Both the CWA and the WCA require that all unavoidable impacts to aquatic resources be minimized to the greatest extent practicable. Discuss all features of the proposed project that have been modified to minimize the impacts to water resources (see MN Rules 8420.0520 Subp. 4):

See attached narrative.

Off-Site Alternatives. An off-site alternatives analysis is not required for all permit applications. If you know that your proposal will require an individual permit (standard permit or letter of permission) from the U.S. Army Corps of Engineers, you may be required to provide an off-site alternatives analysis. The alternatives analysis is not required for a complete application but must be provided during the review process in order for the Corps to complete the evaluation of your application and reach a final decision. Applicants with questions about when an off-site alternatives analysis is required should contact their Corps Project Manager.

The attached narrative discusses the suite of alternatives that were studied during the Draft EIS phase of the proposed BLRT Extension project, as well as the Preferred Alternative (the proposed BLRT Extension project) and the No-Build Alternatives for the Final EIS phase.

Attachment D
Replacement/Compensatory Mitigation

Complete this part ***if*** your application involves wetland replacement/compensatory mitigation not associated with the local road wetland replacement program. Applicants should consult Corps mitigation guidelines and WCA rules for requirements.

Replacement/Compensatory Mitigation via Wetland Banking. Complete this section if you are proposing to use credits from an existing wetland bank (with an account number in the State wetland banking system) for all or part of your replacement/compensatory mitigation requirements.

Wetland Bank Account #	**County**	**Major Watershed #**	**Bank Service Area #**	**Credit Type** (if applicable)	**Number of Credits**
See attached narrative.					

Applicants should attach documentation indicating that they have contacted the wetland bank account owner and reached at least a tentative agreement to utilize the identified credits for the project. This documentation could be a signed purchase agreement, signed application for withdrawal of credits or some other correspondence indicating an agreement between the applicant and the bank owner. *However, applicants are advised not to enter into a binding agreement to purchase credits until the mitigation plan is approved by the Corps and LGU.*

Project-Specific Replacement/Permittee Responsible Mitigation. Complete this section if you are proposing to pursue actions (restoration, creation, preservation, etc.) to generate wetland replacement/compensatory mitigation credits for this proposed project.

WCA Action Eligible for Credit[1]	**Corps Mitigation Compensation Technique**[2]	**Acres**	**Credit % Requested**	**Credits Anticipated**[3]	**County**	**Major Watershed #**	**Bank Service Area #**
See attached narrative.							

[1]Refer to the name and subpart number in MN Rule 8420.0526.
[2]Refer to the technique listed in *St. Paul District Policy for Wetland Compensatory Mitigation in Minnesota*.
[3]If WCA and Corps crediting differs, then enter both numbers and distinguish which is Corps and which is WCA.

Explain how each proposed action or technique will be completed (e.g. wetland hydrology will be restored by breaking the tile……) and how the proposal meets the crediting criteria associated with it. Applicants should refer to the Corps mitigation policy language, WCA rule language, and all associated Corps and WCA guidance related to the action or technique:

See attached narrative.

Attach a site location map, soils map, recent aerial photograph, and any other maps to show the location and other relevant features of each wetland replacement/mitigation site. Discuss in detail existing vegetation, existing landscape features, land use (on and surrounding the site), existing soils, drainage systems (if present), and water sources and movement. Include a topographic map showing key features related to hydrology and water flow (inlets, outlets, ditches, pumps, etc.):

See attached narrative; specifically Appendix B (planset) for depictions of proposed expansions of the boundaries of W39 and W28, Appendix D (conceptual figure depicting potential on-site wetland mitigation area at Theodore Wirth Regional Park), and Figure 2 (page 7) for imagery of potential on-site wetland mitigation opportunities at W22 and near W23.

Attach a map of the existing aquatic resources, associated delineation report, and any documentation of regulatory review or approval. Discuss as necessary:

See attached narrative; specifically Appendix A (Agency Correspondence).

For actions involving construction activities, attach construction plans and specifications with all relevant details. Discuss and provide documentation of a hydrologic and hydraulic analysis of the site to define existing conditions, predict project outcomes, identify specific project performance standards and avoid adverse offsite impacts. Plans and specifications should be prepared by a licensed engineer following standard engineering practices. Discuss anticipated construction sequence and timing:

See attached narrative; specifically Appendix B (planset with planview and cross-sectional drawings).

For projects involving vegetation restoration, provide a vegetation establishment plan that includes information on site preparation, seed mixes and plant materials, seeding/planting plan (attach seeding/planting zone map), planting/seeding methods, vegetation maintenance, and an anticipated schedule of activities:

This will be provided as supplemental information during the permit/ approval processing period.

For projects involving construction or vegetation restoration, identify and discuss goals and specific outcomes that can be determined for credit allocation. Provide a proposed credit allocation table tied to outcomes:

This will be provided as supplemental information during the permit/ approval processing period.

Provide a five-year monitoring plan to address project outcomes and credit allocation:

This will be provided as supplemental information during the permit/ approval processing period.

Discuss and provide evidence of ownership or rights to conduct wetland replacement/mitigation on each site:

This will be provided as supplemental information during the permit/ approval processing period.

Quantify all proposed wetland credits and compare to wetland impacts to identify a proposed wetland replacement ratio. Discuss how this replacement ratio is consistent with Corps and WCA requirements:

See attached narrative.

By signature below, the applicant attests to the following (only required if application involves project-specific/permittee responsible replacement):

- All proposed replacement wetlands were not:
  - Previously restored or created under a prior approved replacement plan or permit
  - Drained or filled under an exemption during the previous 10 years
  - Restored with financial assistance from public conservation programs
  - Restored using private funds, other than landowner funds, unless the funds are paid back with interest to the individual or organization that funded the restoration and the individual or organization notifies the local government unit in writing that the restored wetland may be considered for replacement.
- The wetland will be replaced before or concurrent with the actual draining or filling of a wetland.
- An irrevocable bank letter of credit, performance bond, or other acceptable security will be provided to guarantee successful completion of the wetland replacement.
- Within 30 days of either receiving approval of this application or beginning work on the project, I will record the Declaration of Restrictions and Covenants on the deed for the property on which the replacement wetland(s) will be located and submit proof of such recording to the LGU and the Corps.

Applicant or Representative: Peter DeMuth, P.E. Title: Civil/ Utilities Engineering Lead, Metropolitan Council

Signature: _____ Date: 5/16/16

Attachment E
Local Road Replacement Program Qualification

Complete this part ***if*** you are a local road authority (county highway department, city transportation department, etc.) seeking verification that your project (or a portion of your project) qualifies for the MN Local Government Road Wetland Replacement Program (LGRWRP). If portions of your project are not eligible for the LGRWRP, then Attachment D should be completed and attached to your application.

Discuss how your project is a repair, rehabilitation, reconstruction, or replacement of a currently serviceable road to meet state/federal design or safety standards/requirements. Applicants should identify the specific road deficiencies and how the project will rectify them. Attach supporting documents and information as applicable:

Not applicable – transit project.

Provide a map, plan, and/or aerial photograph accurately depicting wetland boundaries within the project area. Attach associated delineation/determination report or otherwise explain the method(s) used to identify and delineate wetlands. Also attach and discuss any type of review or approval of wetland boundaries or other aspects of the project by a member or members of the local Technical Evaluation Panel (TEP) or Corps of Engineers:

Not applicable – transit project.

In the table below, identify only the wetland impacts from Part 4 that the road authority has determined should qualify for the LGRWRP.

Wetland Impact ID (as noted on overhead view)	**Type of Impact** (fill, excavate, drain)	**Size of Impact** (square feet or acres to 0.01)	**Existing Plant Community Type(s)** in Impact Area[1]	**County, Major Watershed #, and Bank Service Area #** of Impact[2]
Not applicable				

[1]Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.

[2]Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

Discuss the feasibility of providing onsite compensatory mitigation/replacement for important site-specific wetland functions:

The BWSR Road Replacement is not applicable to the proposed BLRT Extension project.

Please note that under the MN Wetland Conservation Act, projects with less than 10,000 square feet of wetland impact are allowed to commence prior to submission of this notification so long as the notification is submitted within 30 days of the impact. The Clean Water Act has no such provision and requires that permits be obtained prior to any regulated discharges into water of the United States. To avoid potential unauthorized activities, road authorities must, at a minimum, provide a complete application to the Corps and receive a permit prior to commencing work.

By signature below, the road authority attests that they have followed the process in MN Rules 8420.0544 and have determined that the wetland impacts identified in Part 4 are eligible for the MN Local Government Road Wetland Replacement Program.

Road Authority Representative: Not applicable Title:

Signature: _____ Date:

Technical Evaluation Panel Concurrence: Project Name and/or Number: 131203

TEP member: Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____ Date:

TEP member: Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____ Date:

TEP member: Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____ Date:

TEP member: Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____ Date:

Upon approval and signature by the TEP, application must be sent to: **Wetland Bank Administration**
Minnesota Board of Water & Soil Resources
520 Lafayette Road North
Saint Paul, MN 55155

Wetland Permit Application

METRO Blue Line Extension Project

Metropolitan Council
Hennepin County, Minnesota

SEH No. HDRMN 131203

May 2016

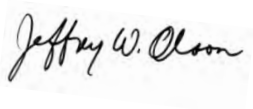
Wetland Permit Application
METRO Blue Line Extension Project
Metropolitan Council
Hennepin County, Minnesota

SEH No. HDRMN 131203

May 2016

The procedures and field methods described in this Wetland Permit Application constitute an official wetland delineation in accordance with the 1987 U.S. Army Corps of Engineers *Wetlands Delineation Manual* and *Regional Supplement*. This Wetland Permit Application follows the procedures and guidance for submitting Clean Water Act Section 404 permit requests as defined in the *Minnesota Local Road Authority Reference Guide to U.S. Army Corps of Engineers (Corps) Clean Water Act Section 404 & Rivers and Harbors Act Section 10 Permits, Version 1.a* (U.S. Army Corps of Engineers and Minnesota Department of Transportation, 2014).

I hereby certify that this Wetland Permit Application was prepared by me or under my direct supervision.



May 16, 2016

Name: Jeffrey W. Olson, Sr. Scientist — Date
Minnesota Certified Wetland Delineator, No. 1089

Short Elliott Hendrickson Inc.
3535 Vadnais Center Drive
St. Paul, MN 55110 - 5196

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Appendices

Wetland Permit Application

METRO Blue Line Extension

Prepared for the Metropolitan Council

1.0 Introduction

This wetland permit application has been prepared to describe impacts to wetlands and aquatic resources associated with the proposed METRO Blue Line Extension (proposed BLRT Extension project) in Hennepin County. The proposed BLRT Extension project is a 13 mile light rail transit line that would extend westward along Trunk Highway (TH) 55 from Target Field Station to the BNSF Monticello Subdivision at the eastern edge of Theodore Wirth Regional Park. It then would follow the BNSF corridor from TH 55 to just south of 73rd Avenue in Brooklyn Park. From that point it would cross eastward to West Broadway Avenue and extend north to a point just north of TH 610. **Figure 1** shows a general location map of the proposed BLRT Extension project. **Figure 2** shows a mapbook of delineated basins, aerial imagery, public waters, and other water resource features in the project area. **Figure 3** shows a mapbook of hydric soils, delineated basins and 2 foot LiDAR contours.

The segment of West Broadway Avenue in the city of Brooklyn Park from approximately Candlewood Drive north to just north of 93rd Avenue North is part of the West Broadway Avenue (CSAH 103) Reconstruction project. Impacts to wetland and aquatic resources within this segment are described in a separate WCA/ Corps Joint Permit Application.

The demonstration of wetland impact avoidance and minimization in this application follows the sequencing process of the Minnesota Wetland Conservation Act (WCA) of 1991 and the federal Clean Water Act. These procedures require that projects that may result in the draining or filling of wetland habitat should demonstrate avoidance and minimization of such impacts. Wetland impacts that cannot be feasibly avoided or minimized must be replaced by compensatory mitigation.

The proposed BLRT Extension project would result in permanent impacts to wetland habitat. This permit application is requesting an Individual Permit approval under Section 404 of the Clean Water Act, Water Quality Certification under Section 401 of the Clean Water Act, and a WCA Approval of Replacement Plan for permanent impacts to aquatic resources, including wetlands. The BLRT Extension project would also result in temporary impacts to wetland and aquatic habitat. A Public Waters Work Permit for work within state-designated Public Waters would be submitted electronically via the Minnesota Department of Natural Resources Permitting and Reporting System (MPARS).

1.1 Relationship of NEPA and Clean Water Act Section 404 Permitting Processes

At the suggestion of the U.S. Army Corps of Engineers (USACE), the Metropolitan Council (Council) is submitting the wetland permit application for this project as close to “concurrent”

as possible with the public review/comment period for the Final Environmental Impact Statement (Final EIS) document, which is planned to be published in mid-July 2016. Submittal of this permit application at this time should allow for the USACE to issue a Public Notice of the wetland permit application at or near the time of the Final EIS publication so that comments received under both reviews can be considered together.

Also, during the National Environmental Policy Act (NEPA) process for this project, the Council, the Federal Transit Administration (FTA), U.S. Environmental Protection Agency (USEPA), and the USACE have agreed to follow an informal process that merges decision-making under NEPA and Section 404 of the Clean Water Act. The NEPA/Section 404 Merger process recognizes that both NEPA and Section 404 review processes involve the evaluation of project purpose and need, the development of alternatives, the assessment of environmental and social impacts, and the balancing/mitigation of impacts in a Preferred Alternative.

This coordination process is structured around 4 concurrence points to establish progress on the above-noted steps. The 4 concurrence points are: 1) Purpose and Need, 2) Range of Alternatives Considered, 3) Preferred Alternative, and 4) Avoidance and Minimization of impacts to wetlands and aquatic resources. Written concurrence was received on June 19, 2013 from USACE and USEPA on the first two concurrence points (purpose and need and range of alternatives). Concurrence on the preferred alternative (the proposed BLRT Extension project) was received from the USACE and USEPA on October 1, 2013. This WCA/ Corps Joint Permit Application contains a discussion of Avoidance and Minimization of impacts to wetlands and aquatic resources as well as a preliminary mitigation strategy. This discussion is anticipated to be sufficient for the USACE to issue a letter of agreement concerning Concurrence Point #4. It is anticipated that the USACE would be able to issue this letter by mid-June 2016. Following completion of the NEPA process and further refinement of the proposed BLRT Extension project in advanced design, the mitigation plan would be refined and finalized.

Given the comprehensive environmental review process that has been conducted for the proposed BLRT Extension project and the USACE's role as a cooperating agency for the NEPA process, the approach for this permit application submittal is to refer to pertinent sections of the Final EIS for additional information, rather than reproducing those data here. An electronic copy of the Final EIS will be available upon request.

1.1.1 Concurrence Point 1: Purpose and Need

Written concurrence was received from the USACE and USEPA on June 19, 2013 concerning Concurrence Point 1. Refer to **Appendix A** for written concurrence.

1.1.2 Concurrence Point 2: Range of Alternatives Considered

Written concurrence was received from the USACE and USEPA on June 19, 2013 concerning Concurrence Point 2. Refer to **Appendix A** for written concurrence.

1.1.3 Concurrence Point 3: Preferred Alternative

Written concurrence was received from the USACE and USEPA on October 13, 2013 concerning Concurrence Point 3. Refer to **Appendix A** for written concurrence.

1.1.4 Concurrence Point 4 (Pending): Avoidance and Minimization of Impacts to Wetlands and Aquatic Resources

Proposed measures to avoid and minimize impacts to wetlands and aquatic resources associated with the proposed BLRT Extension project are described in this wetland permit

application. See Section 5.5.1. Additionally, a preliminary mitigation strategy is described herein. See Section 5.6. The Council proposes to use a combination of private wetland banking credits and on-site wetland mitigation opportunities to compensate for proposed impacts to wetlands and aquatic resources. Available wetland credits within Hennepin County would be prioritized and credits elsewhere in Bank Service Area 7, such as Carver County would be used secondarily. Supplemental information on final design elements of the proposed BLRT Extension project would be submitted to the USACE and WCA LGUs during advanced design stages in support of the replacement plan approval and issuance of the Section 404 USACE permit. The Council anticipates that this WCA/Corps Joint Permit Application provides the necessary information for the USACE to provide Concurrence Point 4 approval. The Section 404 permit and final WCA approvals would be issued after the Record of Decision for the proposed BLRT Extension project is published. Specific wetland bank credits would be identified and proposed for compensatory mitigation after the publication of the ROD as well. A summary of wetland and aquatic resource impacts, measures to avoid and minimize impact to wetlands and aquatic resources and a proposed preliminary mitigation strategy is described herein.

2.0 Project Description

2.1 Project Location

The proposed BLRT Extension project is a 13 mile light rail transit line that would extend westward along Trunk Highway (TH) 55 from Target Field Station in downtown Minneapolis to the BNSF Monticello Subdivision at the eastern edge of Theodore Wirth Regional Park. It then would follow the BNSF corridor from TH 55 to just south of 73rd Avenue in Brooklyn Park. From that point it would cross eastward to West Broadway Avenue and extend north to a point just north of TH 610. **Figure 1** shows a general location map of the proposed BLRT Extension project. The proposed BLRT Extension project area is depicted in detail in **Figures 2 and 3** and in **Appendix B** (planset of planview and cross-sectional drawings)**.**

2.2 Existing Conditions

The character of the area surrounding the proposed BLRT Extension project transitions from a moderately dense urban setting in north Minneapolis to a less dense suburban setting starting in Golden Valley, Robbinsdale, and Crystal, and extending through Brooklyn Park at the north end of the corridor. The proposed BLRT Extension project area includes a variety of land use patterns that have been influenced by the transportation-oriented history of the corridor. Low-density, auto-oriented land uses have heavily influenced existing development patterns in the corridor, which primarily reflect highway-oriented regulations and traditional suburban development forms. Additionally, the presence of the existing railway lines influenced the development patterns and settings in the proposed BLRT Extension project corridor (e.g., development set back from the railroad right-of-way). Portions of the proposed BLRT Extension project area near Highway 610 to the northern terminus are to some extent still agricultural, though rapidly developing with commercial uses.

2.3 Purpose and Need

The purpose of the proposed BLRT Extension project is to provide transit service which would satisfy the long-term regional mobility and accessibility needs for businesses and the traveling public.

The proposed BLRT Extension project is needed to effectively address long-term regional transit mobility and local accessibility needs while providing efficient, travel-time competitive transit service that supports economic development goals and objectives of local, regional, and statewide plans.

The proposed BLRT Extension project Purpose and Need is Concurrence Point #1, which was agreed to during the informal arrangement to combine where possible the NEPA and Clean Water Act Section 404 processes. Concurrence of the Purpose and Need was obtained in June 19, 2013 (see **Appendix A**).

3.0 Project Alternatives

The Range of Alternatives Considered is NEPA/Section 404 Merger Concurrence Point #2, as noted in Section 1.1 above. Concurrence was obtained on the Range of Alternatives Considered on June 19, 2013. The Final EIS summarizes the decision-making process (discussed in detail in the Draft EIS) involved in selecting the Locally Preferred Alternative (LPA) and the Least Environmentally Damaging Practicable Alternative (LEDPA). The Final EIS discusses in detail the No-Build Alternative and the Preferred Alternative (the Preferred Alternative is the proposed BLRT Extension project).

Table 1 summarizes wetland impacts associated with the Draft EIS alternatives including the Draft EIS Preferred Alternative. It should be noted that wetland impacts in the Draft EIS were based on a 1% level of engineering effort; whereas, wetland impacts associated with the proposed BLRT Extension project as discussed in the Final EIS are based on a considerably higher level of engineering effort. Also, wetland boundaries in the Draft EIS were based on a cursory "windshield" level of effort augmented with off-site data such as the National Wetland Inventory and hydric soil mapping data. Wetland impacts in the Final EIS are based on approved boundaries of delineated wetlands within the proposed BLRT Extension project area and agency concurrence on jurisdiction of delineated wetlands and actual limits of disturbance. Thus, wetland impacts as discussed in the Draft EIS are not directly comparable to those discussed in the Final EIS and in this WCA/ Corps Joint Permit Application.

The selection of the Draft EIS Preferred Alternative was a best balance of social impacts and environmental impacts in compliance with 404 (b)(1) Guidelines. The Draft EIS No-Build assumed no wetland impacts; whereas, the Final EIS No-Build assumes a considerable amount of road infrastructure improvement that would proceed in the absence of the proposed BLRT Extension project (See Section 3.2). The large road infrastructure projects that are assumed with the Final EIS No-Build are likely associated with considerable though undefined wetland impacts.

Table 1
Wetland Impacts Associated with Draft EIS Alternatives

Alternative	Alignment/ Station Impact (ac)	Park and Ride Impact (ac)	OMF Impact (ac)	Total Impacts (ac)
No-Build	0	0	0	0
Enhanced Bus/ TSM	0	0	0	0
A – C - D1	3.2	0	0	3.2
B – C – D1 (**The Draft EIS Preferred Alternative**)	9.3	0.1	93rd Ave option: 0.0	9.4
			101st Ave option: 0.8	10.2
B - C – D2	3.9	0.1	93rd Ave option: 0.0	4.0
			101st Ave option: 0.8	4.8

3.1 The Final EIS Preferred Alternative (the Proposed BLRT Extension Project)

The Preferred Alternative (hereinafter referred to as the proposed BLRT Extension project) begins at Target Field Station in downtown Minneapolis and follows Olson Memorial Highway west to the BNSF corridor just west of Thomas Avenue where it enters the BNSF right-of-way. Adjacent to the freight rail tracks, it continues in the rail corridor through the cities of Golden Valley, Robbinsdale, Crystal, and into Brooklyn Park. It then crosses Bottineau Boulevard at 73rd Avenue to West Broadway Avenue continuing north to the northern terminus just north of TH 610 near the Target North Campus. See **Figures 2 and 3**.

The proposed BLRT Extension project includes seven new LRT bridges: a 350-foot-long crossing of the Hennepin Energy Recovery Center (HERC) driveway, a 700-foot-long crossing of the ponds immediately north of Golden Valley Road (Wetlands 38 and 39), a 1,200-foot-long crossing of Grimes Pond (Wetland 33) in Robbinsdale, a 375-foot-long bridge over TH 100, a 1,200-foot-long bridge over the CP rail tracks, a 925-foot-long bridge over the 73rd Avenue/Bottineau Boulevard intersection, and a 250-foot-long bridge over TH 610.

In addition, five reconstructed roadway bridges are part of the proposed BLRT Extension project: a 375-foot-long Olson Memorial Highway bridge over BNSF, a 375-foot-long Plymouth Avenue bridge, a 120-foot-long Theodore Wirth Parkway bridge, a 215-foot-long Golden Valley Road bridge, and a 110-foot-long 36th Street bridge. The Olson Memorial Highway Bridge over I-94 in Minneapolis and the I-94/I-694 Bridge over BNSF in Brooklyn Park would require modifications to accommodate the proposed BLRT Extension project. Two pedestrian bridges are also being considered over Bottineau Boulevard (CR 81) at Bass Lake Road and at 63rd Avenue.

The general elements of the proposed BLRT Extension project are passenger stations, the Operations and Maintenance facility (OMF), Traction Power Sub-Stations (TPSSs), fare collection, trackway, vehicles, and train control. See **Figures 2 and 3** and **Appendix B** (planview and cross-sectional drawings planset) for additional information. These features of the proposed BLRT Extension project are briefly described below.

- **Stations and Park and Ride Facilities** – See **Table 2** for a list and description of the stations. Both Golden Valley Road and Plymouth Avenue Stations are included in the proposed BLRT Extension project. Both stations would have vertical circulation (elevator and stairs) to allow passengers to access the station platforms. The 63rd Avenue station would have a pedestrian overpass of the BNSF freight tracks to provide better rider access between the parking ramp and the proposed BLRT Extension project platform.

- **Operations and Maintenance Facility (OMF)** – The OMF site would be located at the north end of the proposed BLRT Extension project in the city of Brooklyn Park. The proposed OMF site is depicted in **Figures 2 and 3**. The proposed OMF site was selected based on its proximity to the end of the line, adequate space for the special trackwork required between the mainline track and the facility, and adequate property for the facility (about 10.4 acres). The OMF site would be occupied by a storage and maintenance building that is about 140,000 square-feet, surface parking for employees and visitors, trackwork, and open space. The facility would include areas to store, service, and maintain up to 30 light rail vehicles (LRVs), vehicle washing and cleaning equipment, and office space to accommodate staff who would report for work at this facility. The facility would be equipped to perform daily cleaning and repair activities on the LRVs as they enter and leave revenue service. Scheduled service and maintenance inspections also would be performed in this facility.

- **Traction Power Substations** – A total of 17 potential TPSS locations have been identified along the proposed BLRT Extension project. TPSS sites each have a footprint of approximately 4,000 square feet (SF) and are able to accommodate a single-story building about 40 feet by 20 feet. The Council anticipates that most TPSS sites would be located within existing transportation rights-of-way.
- **Fare-Collection System** – A self-service, proof-of-payment fare-collection system was assumed for the proposed BLRT Extension project, consistent with that used on the other regional transitways today. A proof-of-payment fare-collection system minimizes the right-of-way needed for each station.
- **Trackway** – LRVs would operate on standard-gauge rail. The proposed BLRT Extension project would be double-tracked throughout to provide separate tracks for northbound and southbound trains. Crossovers to allow trains to cross from the northbound to the southbound tracks would be provided at regular intervals for special operations or emergencies. Typically, the trackway in the BNSF rail corridor segment of the proposed BLRT Extension project would be ballasted track separate from the freight rail track. Alignments in streets would be either ballasted or embedded depending on the location and the context of the street.
- **Vehicles** – The conceptual engineering to support the Final EIS assumes the following LRV characteristics:
  - Articulated train cars could operate in either directional and could be operated as a single-unit or multi-unit train.
  - Cars would be designed for use with an overhead catenary system.
  - Each car would have 66 seats and capacity for 160 passengers (sitting and standing).
  - Two- to three-car trains would operate at speeds up to 55 mph.
  - Cars would be fully compatible with Americans with Disabilities Act (ADA) standards.
- **Train Control** – An operator would occupy each train and would have control over acceleration and braking as well as operating the passenger doors. Automated systems would inform the operator of various train and transitway operating conditions and would manage traffic signal priority, activation of crossing gates, and track switch operations.

Operating Frequencies – The Final EIS assumes that trains would operate at 10-minute frequencies for weekday operations.

Table 2
Stations Along the Proposed BLRT Extension Project

Station	Platform Configuration	Passenger Drop-off	Park and Ride Facility
Target Field Station[1]	Not applicable	Not applicable	Not applicable
Van White Boulevard	Center	No	No
Penn Avenue	Center	No	No
Plymouth Avenue/Theodore Wirth Regional Park	Center	Yes	No
Golden Valley Road	Center	Yes	100 spaces (surface lot)
Robbinsdale	Center	Yes	550 spaces (parking ramp)

Table 2 Stations Along the Proposed BLRT Extension Project			
Station	**Platform Configuration**	**Passenger Drop-off**	**Park and Ride Facility**
Bass Lake Road	Center	Yes	170 spaces (surface lot)
63rd Avenue	Center	Yes	565 spaces (existing ramp spaces)
Brooklyn Boulevard	Center	Yes	No
85th Avenue	Center	Yes	No
93rd Avenue	Center	Yes	No
Oak Grove Parkway	Center	Yes	850 spaces (parking ramp)

[1] Built separately from the proposed BLRT Extension project and included under the No-Build Alternative definition.

3.2 The Final EIS No-Build Alternative

The Final EIS No-Build Alternative reflects existing and committed improvements to the regional transit network for the horizon year of 2040. The Final EIS No-Build Alternative does not include the proposed BLRT Extension project. Based on the Council's *Thrive MSP 2040 Transportation Policy Plan* (*2040 TPP*), major transportation improvements assumed under the No-Build Alternative include:

- I-494 expansion to six lanes from TH 55 to I-94/I-694
- TH 610 extension to I-94 in Maple Grove
- Expansion of West Broadway Avenue (CSAH 103) to four lanes between 85th Avenue North and 93rd Avenue North
- CSAH 81 reconstruction/expansion from north of 63rd Avenue North to TH 169 in Brooklyn Park
- I-94 Auxiliary Lane Construction in St. Michael to Rogers

The adopted regional *2040 TPP* includes several improvements in its fully funded transit scenario. Near the proposed BLRT Extension project this includes the Penn Avenue Bus Rapid Transit (C Line) and Chicago-Fremont Avenue Arterial Bus Rapid Transit line. The plan assumes modest changes to transit service in the corridor, as reflected in the No-Build, particularly to reflect the arterial BRT lines (C Line and Emerson-Fremont) or feeder service to the METRO Green Line Extension.

4.0 General Public Interest Factors

The following summary describes the effects and potential consequences due to the proposed BLRT Extension project on several general factors considered to be in the public interest, which may be helpful in preparing the wetland permit decision(s) and evaluation of potential effects for the local, state, and federal wetland permits needed for the proposed BLRT Extension project. The summary that follows is derived from the Final EIS and the Public Involvement process.

1. **Transportation**: The proposed BLRT Extension project would fill a growing need for mass transit in the western and northwestern suburbs and is anticipated to result in 27,000 daily boardings in 2040. The growing population in the vicinity of the proposed

BLRT Extension project would have a choice to use the proposed BLRT Extension project and use the increasingly large network of mass transit connectivity. The proposed BLRT Extension project would be designed to have a neutral impact on existing freight rail. Concerning vehicular traffic, the No-Build would have seven intersections operating at a Level of Service[1] (LOS) F in 2040; whereas, the proposed BLRT Extension project would have only one intersection operating at LOS F in 2040.

2. **Navigation**: The proposed BLRT Extension project would have no effect on navigation.

3. **Existing/Potential Land Use**: The proposed BLRT Extension project is compatible with the local land use planning policies of the cities of Minneapolis, Golden Valley, Robbinsdale, Crystal and Brooklyn Park.

4. **Public Facilities and Services**: The construction of the proposed BLRT Extension project is expected to cause disruptions to traffic operations, including lane closures, short-term intersection and roadway closures, and detours that would cause local, short-term increases in congestion. Mitigation for these effects would include development and implementation of the Construction Mitigation Plan, which includes a Construction Communication Plan and a construction staging plan. Contractors would need to comply with the requirements of MnDOT, Hennepin County, and all municipalities affected by construction activities related to the closing of roads. Contractors would be required to comply with all guidelines in the Minnesota Manual on Uniform Traffic Control Devices and would develop appropriate traffic control plans.

5. **Business/Home Relocations**: The proposed BLRT Extension project would require full acquisition of 14 parcels and partial acquisitions at 277 parcels. Ten businesses would be displaced by the proposed BLRT Extension project; no residential displacements are anticipated. Property owners subject to acquisition would receive payment of fair market compensation and provision of relocation assistance in accordance with the Uniform Relocation and Real Property Acquisitions Policies Act of 1970 and Minnesota Statute 117.

6. **Historical/Archaeological**: The proposed BLRT Extension project has been evaluated in accordance with Section 106 of the National Historic Preservation Act. The following findings have been made regarding the effects the proposed BLRT Extension project would have on historic resources; the Minnesota Historic Preservation Office has concurred with these findings:

- Adverse effect on the Wayman A.M.E Church, Floyd B. Olson Memorial Statue, Osseo Branch Historic District, Homewood Historic District, Theodore Wirth Segment of the Grand Rounds Historic District, and the West Broadway Avenue Residential Historic District

- No adverse effect (with implementation of mitigation measures) on Sumner Branch Library, Labor Lyceum, Sacred Heart Catholic Church, Robbinsdale Waterworks, and Hennepin County Library – Robbinsdale Branch.

A Section 106 Memorandum of Agreement has been developed that outlines the required mitigation measures to address adverse effects on historic properties.

[1] The effectiveness of roadway intersections in handling traffic is commonly measured in Level of Service (LOS) letter grades ranging from A to F. Generally, the LOS D-E boundary is considered the threshold for ineffective traffic operations.

7. **Tribal Trust Resources**: The proposed BLRT Extension project would have no effect on Tribal Trust resources.

8. **Aesthetic values**: There would be a minor adverse effect on the visual values and aesthetics in several settings throughout the proposed BLRT Extension project area including Olson Memorial Boulevard, Theodore Wirth Regional Park area, Sochacki Park area, residential settings adjacent to the proposed BLRT Extension project in portions of Robbinsdale and Crystal, segments along Bottineau Boulevard including intersections at 63rd Street, 73rd Street and Bass Lake Road, and the Rush Creek Regional Trail area. Noise barriers, where implemented, may impact visual aesthetic values. In some cases the impact could be positive by screening adjacent residences from the proposed BLRT Extension project corridor; in other cases the impact could be perceived as negative because the noise barriers could block views of park areas. Visual and aesthetic impacts can be mitigated with some visual screening and thoughtful management of operational lighting.

9. **Business Activity**: The proposed BLRT Extension project would displace 10 businesses. Other businesses near the proposed BLRT Extension project may expand in order to capitalize on customer and employee accessibility. Some businesses may choose to relocate near the proposed BLRT Extension project for the same reasons.

10. **Employment**: The proposed BLRT Extension project itself would create jobs in the short-term related to the construction activities. Long-term, operation of the proposed BLRT Extension project would create jobs associated with increased transit operations and maintenance expenditures.

11. **Property Values**: Property values are affected by a variety of market conditions. Impacts of an LRT project on property values are difficult to assess conclusively. Continuing population growth and a strengthening of the local economy within the proposed BLRT Extension project corridor may contribute to redevelopment and increased property values. Studies have shown that LRT transit around the country has been an impetus for increased property values near station locations.

12. **Tax Revenues:** The property acquisitions required for the proposed BLRT Extension project would remove property from the local tax base. The lost tax revenues associated with the reduction in the tax base from the proposed BLRT Extension project would be a recurring loss on an annual basis. Partially offsetting these losses, however, would be an increase in other tax revenues. For example, the creation of new jobs and earnings associated with the recurring operations and maintenance spending would foster greater retail spending. The additional revenues from this spending would be recurring gains. The construction of the proposed BLRT Extension project is also expected by the Council to have positive effects on the value of residential and commercial properties within walking distance of a station. The increase in value translates into greater tax revenues and is expected to accrue to the local economy.

13. **Safety**: The proposed BLRT Extension project would be developed in accordance with transitway design guidelines; and the oversight of security personnel would result in no adverse impacts related to safety and security during the operation of the proposed BLRT Extension project. Roadway intersections, as well as pedestrian and bicycle facilities would be improved to meet current safety standards.

14. **Water Supply**: The proposed BLRT Extension project would have no effect on water supply.

15. **Wetlands**: Wetlands within the proposed BLRT Extension project area are disturbed from diminishing ground water, infestations of invasive species, dumping of construction rubble, and encroachment of infrastructure. With proposed mitigation, anticipated to be at a 2:1 ratio, it is anticipated that, overall, the proposed BLRT Extension project would provide an increase in wetland functions and could have a slight beneficial effect.

16. **Flooding**: Floodplain impacts (estimated at 17,000 cubic yards) would be mitigated at a 1:1 ratio with respect to volume (cubic yards). The proposed BLRT Extension project is designed per stringent specifications required in Executive Order 13690 which takes into account weather patterns associated with climate change and anticipated increased intensity of storm events, and as such, the proposed BLRT Extension project would have no effect on flooding intensity or duration.

17. **Soils**: The proposed BLRT Extension project would require extensive soil correction in areas of poor soils; primarily between Olson Memorial Highway and 36th Avenue. Construction stormwater BMPs implemented in accordance with the required NPDES permit discussed in item #23 above would minimize erosion of soil resources.

18. **Mineral Needs**: There would be no effect on mineral resources throughout the proposed BLRT Extension project area. There are no known sand, gravel or metallic ore resources that would be rendered inaccessible as a result of the proposed BLRT Extension project.

19. **Farmland/Food Supply**: The proposed BLRT Extension project would have no effect on Farmland and Food Supply.

20. **Groundwater**: The proposed BLRT Extension project would require some temporary dewatering for construction in and near aquatic resources. Construction staging areas would be designed to contain potential spills in accordance with a contractor-prepared Spill Prevention, Control, and Countermeasures (SPCC) plan.

21. **Noise levels**: The proposed BLRT Extension project would have 366 moderate and 618 severe noise impacts (as defined by FTA noise criteria) without mitigation. With the implementation of Federal Railroad Administration Quiet Zones, impacts would be reduced to 176 moderate and 120 severe. With further mitigation measures (these include wayside warning devices that can be sounded instead of the bell on the LRT vehicle, noise barriers, and interior testing and potential sound insulation), five moderate and two severe noise impacts would remain.

22. **Terrestrial Habitat**: Terrestrial habitat in the proposed BLRT Extension project area is generally forest; including some larger forest complexes and some smaller remnants. All forested habitat in the proposed BLRT Extension project area is disturbed as a result of infrastructure encroachment, fragmentation, dumping, selective tree cutting, and infestations of invasive species. However, these terrestrial habits do provide important habitat for migrating and foraging wildlife. The proposed BLRT Extension project would impact 18 acres of larger forest complexes and 11 acres of smaller forest remnants. Forested habitat loss would be mitigated through tree planting and other landscape restoration.

23. **Aquatic Habitat**: The proposed BLRT Extension project is anticipated to impact approximately 10 acres of wetland, 3 acres of storm pond, and would involve the relocation of approximately 450 feet of Bassett Creek. Impacts to wetlands and aquatic resources would be avoided and minimized to the extent practicable. Unavoidable impacts to wetlands would be mitigated, typically at a 2: 1 mitigation ratio, with a

combination on on-site mitigation and purchase of private wetland mitigation credits. Impacts to the channel of Bassett Creek would be would be minimized with appropriate restoration practices. It is anticipated that the proposed BLRT Extension project would have a minor adverse effect on aquatic habitat.

24. **Habitat Diversity and Interspersion**: The proposed BLRT Extension project mostly stays on or adjacent to an existing freight rail corridor and roadways. The habitat impacts that would result from the proposed BLRT Extension project occur in highly fragmented and disturbed urbanized habitat. With appropriate mitigation such as wetland replacement and tree planting, the proposed BLRT Extension project would have no effect on habitat diversity and interspersion.

25. **Endangered Species**: There would be no effect on state-listed species potentially present in the proposed BLRT Extension project area such as Blanding's turtle and the pugnose shiner if appropriate Minnesota DNR guidelines are adhered to during the construction and post-construction phase. The proposed BLRT Extension project would have No Effect on federally-listed aquatic species known to exist in Hennepin County, i.e. the Higgins eye pearlymussel and the Snuffbox mussel. Per coordination with the USFWS, the conclusion of "May Affect, Incidental Take Not Prohibited", concerning the northern long-eared bat (federally threatened), is appropriate with respect to the proposed BLRT Extension project.

26. **Wild and Scenic Rivers**: The proposed BLRT Extension project would have no effect on Wild and Scenic rivers.

27. **Shoreline Processes**: To accommodate the proposed BLRT Extension project, a ~450-foot section of Bassett Creek would need to be moved approximately 20 feet to the west. With BMPs in place and appropriate re-vegetation, the proposed BLRT Extension project would have no effect on shoreline processes.

28. **Water Quality**: The proposed BLRT Extension project would cause an 83 percent increase in the impervious area within the limits of disturbance. Long-term mitigation measures would include designing and constructing permanent BMPs, such as detention and infiltration facilities, which would control and treat stormwater runoff caused by an increase in impervious surfaces as a result of the proposed BLRT Extension project. A National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Permit from MPCA would be required. A Stormwater Pollution Prevention Plan (SWPPP), which must be submitted at the time of the permit application, would be developed and implemented during construction. Construction-phase mitigation measures would include developing erosion- and sediment-control plans to control runoff and reduce erosion and sedimentation during construction, and limiting the amount of sediment carried into lakes, streams, wetlands, and rivers by stormwater runoff.

29. **State-listed Impaired Section 303(d) Waters**: Bassett Creek is listed on the 303(d) List of Impaired Waters. Approximately a 400-foot reach of Bassett Creek would be re-located 20 feet to the west in order to accommodate the proposed BLRT Extension project and associated infrastructure. BMPs would be in place to maintain water quality in Bassett Creek. Other impaired waters that would receive runoff from the proposed BLRT Extension project include the Mississippi River (would receive proposed BLRT Extension project runoff via Bassett Creek); Crystal Lake; Upper, Middle, and Lower Twin Lakes; and Shingle Creek. The Total Maximum Daily Load (TMDL) requirements for these receiving waters have been incorporated into stormwater management designs for the proposed BLRT Extension project.

30. **Air Quality**: The vehicle miles traveled associated with the No-Build and the proposed BLRT Extension project are estimated to be approximately equal. Air quality impacts would be minimized during construction through management of fugitive dust and emissions from idling construction equipment. The electric motors used for the proposed BLRT Extension project are cleaner than those used in diesel-burning mass transit. Impacts to air quality would be minimized by appropriate management of fugitive dust and equipment idling emissions during construction.

31. **Energy**: The proposed BLRT Extension project and associated infrastructure would be designed to be energy efficient. Considering a complete life cycle analysis and anticipated (year 2040) vehicle miles traveled comparing the proposed BLRT Extension project and the No-Build, a transportation landscape using proposed BLRT Extension project would use slightly less energy as a transportation landscape without proposed BLRT Extension project.

32. **Secondary and cumulative effects**:

- The proposed BLRT Extension project in combination with the reasonably foreseeable future actions, including the West Broadway Avenue Reconstruction project, would increase overall transportation demand.
- The combination of the roadway improvements and the proposed BLRT Extension project would draw additional vehicle traffic associated with passengers accessing the proposed BLRT Extension project stations
- Reasonably foreseeable future actions would likely increase the density and intensity of development in the proposed BLRT Extension project corridor
- The proposed BLRT Extension project in combination with the reasonably foreseeable future actions could change the character of neighborhoods by increasing mixed use development in the cumulative effects study area
- Additional transportation investments in the proposed BLRT Extension corridor to service induced development, in combination with the reasonably foreseeable future actions, could lead to the acquisition of right-of-way and the relocation of residents and businesses
- Induced development associated with the proposed BLRT Extension project in combination with the reasonably foreseeable future actions could cumulatively could diminish the integrity of a historic property's or district's location, feeling, or association cultural resources
- Induced development associated with the proposed BLRT Extension project and additional transportation facilities in combination with the reasonably foreseeable future actions would change the views in neighborhoods
- Induced development associated with the proposed BLRT Extension project in combination with the reasonably foreseeable future actions and natural population growth would likely place a greater demand on parks and open spaces and result in a cumulative effect
- Induced development associated with the proposed BLRT Extension project in combination with the reasonably foreseeable future actions would likely increase the number of customers in the proposed BLRT Extension project corridor

- Increased development associated with the proposed BLRT Extension project in combination with the reasonably foreseeable future actions could require more service personnel and could cumulatively strain local providers' capacity to deliver services.

33. Recreation: The proposed BLRT Extension project would provide several long-term improvements to pedestrian and bicycle accessibility and safety including bicycle parking, connectivity, trail head improvements, and pedestrian bridges. The construction phase of the proposed BLRT Extension project would temporarily disrupt the use of existing bicycle and pedestrian facilities; detours would be provided as appropriate, and communicated to the public.

5.0 Wetlands and Aquatic Resources

5.1 Wetland Delineation

Wetlands throughout the proposed BLRT Extension project area were delineated during the spring and summer of 2015. Field reviews of wetland delineations by the Technical Evaluation Panel (TEP) and the USACE were completed during the summer and fall of 2015. Notices of Decision (NODs) concerning concurrence on wetland boundaries and types were obtained during the winter of 2015/ 2016 from all relevant WCA LGUs throughout the proposed BLRT Extension project area. See **Appendix A**.

A "***Technical Memorandum: Jurisdictional Issues Associated with Delineated Basins; Proposed BLRT Extension project***" was prepared for the TEP and the USACE describing issues pertaining to jurisdiction (per the WCA, the USACE and the DNR) of each delineated basin within the proposed BLRT Extension project area. The intent of this Technical Memorandum was to serve as an intermediate step before submittal of this WCA/ Corps Joint Permit Application. During the winter and spring of 2016, NODs, specifically pertaining to "No Loss" per the WCA were obtained from each WCA LGU. The "No Loss" NODs establish that either a particular basin is outside of the scope of the WCA or that a specific impact to a basin is not regulated per the WCA (for example, excavation impacts to a Type 1 or 2 wetland). Concurrence from the USACE pertaining to Section 404 jurisdiction of each delineated basin was obtained in correspondence responding to the request for a "hybrid" Preliminary/ Approved Jurisdictional Determination (JD).

Figure 1 provides a general location map of the proposed BLRT Extension project area. **Figure 2** provides a mapbook with aerial imagery, delineated boundaries of basins, National Wetland Inventory (NWI), Public Waters Inventory (PWI), and other water resources features. **Figure 3** provides a mapbook with aerial imagery, delineated boundaries of basins, hydric soils mapping, and 2 foot LiDAR contours.

The approved wetland delineation lines and agency jurisdiction concurrence were used to guide the proposed BLRT Extension project avoidance and minimization process and ultimately determine the wetland impacts necessary for construction.

5.2 Results

A total of 44 palustrine wetlands and one riverine aquatic resource were delineated in the proposed BLRT Extension project area. **Table 3** summarizes characteristics and relevant municipality and WCA LGU for each wetland and aquatic resource in the proposed BLRT Extension project area. **Figures 2 and 3** depict the location of delineated wetlands and aquatic resources in the proposed BLRT Extension project area. **Appendix B** depicts planview and cross-sectional drawings of the proposed BLRT Extension project and associated impacts to wetlands and aquatic resources.

Table 3 summarizes characteristics of basins delineated within the proposed BLRT Extension project.

Table 3
Summary of Basin Characteristics Delineated Within the Proposed BLRT Extension Project

Basin ID	Hydric Soil Map?	Field-Verified Cowardin	Eggers & Reed	Circ. 39 Class. [2]	Total Basin Size (ac)		Municipality (WCA LGU)
					natural basin	storm pond	
W1	Yes	PEM1A	Seas. flooded basin	Type 1	1.59		Brooklyn Park (Shingle Creek WMC)
W2	Yes	PEM1A	Seas. flooded basin	Type 1	1.37		Brooklyn Park (Shingle Creek WMC)
W3	Yes	PEM1A	Seas. flooded basin	Type 1	1.23		Brooklyn Park (Shingle Creek WMC)
W4	Yes	PEM1A	Seas. flooded basin	Type 1	0.14		Brooklyn Park (Shingle Creek WMC)
W5	Yes	PFO1A	Floodplain forest	Type 1	0.07		Brooklyn Park (Shingle Creek WMC)
W6	Yes	PFO1A	Floodplain forest	Type 1	0.14		Brooklyn Park (Shingle Creek WMC)
W7	Yes	PEM1A	Seas. flooded basin	Type 1	0.55		Brooklyn Park (Shingle Creek WMC)
W8	Yes	PFO1A	Floodplain forest	Type 1	0.14		Brooklyn Park (Shingle Creek WMC)
W9	Yes	PEM1A	Seas. flooded basin	Type 1	0.18		Brooklyn Park (Shingle Creek WMC)
W10	Yes	PEM1A	Seas. flooded basin	Type 1		0.06	Brooklyn Park (Shingle Creek WMC)
W11	Partially	PEM1A	Seas. flooded basin	Type 1	1.06		Brooklyn Park (Shingle Creek WMC)
W12	Yes	PEM1A	Seas. flooded basin	Type 1	0.06		Brooklyn Park (Shingle Creek WMC)
W13	Partially	PEM1A	Seas. flooded basin	Type 1	2.41		Brooklyn Park (Shingle Creek WMC)

Table 3

Summary of Basin Characteristics Delineated Within the Proposed BLRT Extension Project

Basin ID	Hydric Soil Map?	Field-Verified Cowardin	Eggers & Reed	Circ. 39 Class. [2]	Total Basin Size (ac)		Municipality (WCA LGU)
					natural basin	storm pond	
W14	Yes	PUBGx	Deep Marsh	Type 4		0.61	Brooklyn Park (Shingle Creek WMC)
W15	Yes	PSS1A	Shrub Carr	Type 6		0.79	Brooklyn Park (Shingle Creek WMC)
W16	No	PUBGx	Deep Marsh	Type 4		0.82	Brooklyn Park (Shingle Creek WMC)
W17	No	PSS1A	Shrub Carr	Type 6		0.05	Brooklyn Park (Shingle Creek WMC)
W26	No	PEM1A	Seas. flooded basin	Type 1		0.01	Brooklyn Park (Shingle Creek WMC)
W27	No	PEM1A	Seas. flooded basin	Type 1		0.62	Brooklyn Park (Shingle Creek WMC)
W28	Yes	PFO1A	Floodplain forest	Type 1	2.57		Brooklyn Park (Shingle Creek WMC)
W29	Yes	PEM1C	Shallow Marsh	Type 3		1.02	Crystal (Crystal)
W30	No	PUBGx	Open Water	Type 5		1.2	Robbinsdale (Shingle Creek WMC)
W31	No	PSS1A	Shrub Carr	Type 6	(part of W32)		Robbinsdale (Bassett Creek WMC)
W32	No	PFO1A/ PEMC/ PSS1C	Floodplain forest/ Shallow Marsh/ Shrub Carr	Type 1/ Type 3/ Type 6	7.71		Robbinsdale (Bassett Creek WMC)
W33	No	PUBGx	Open Water	Type 5	7.41		Robbinsdale (Bassett Creek WMC)
W34	Yes	PEM1F	Deep Marsh	Type 4	17.01		Golden Valley (Golden Valley) and Robbinsdale (Bassett Creek WMC)

Table 3

Summary of Basin Characteristics Delineated Within the Proposed BLRT Extension Project

Basin ID	Hydric Soil Map?	Field-Verified Cowardin	Eggers & Reed	Circ. 39 Class. [2]	Total Basin Size (ac)		Municipality (WCA LGU)
					natural basin	storm pond	
W35	No	PFO1A	Floodplain forest	Type 1	0.85		Robbinsdale (Bassett Creek WMC)
W36	No	PSS1A	Shrub Carr	Type 6	1.39		Robbinsdale (Bassett Creek WMC)
W37	No	PEM1A	Seas. flooded basin	Type 1		0.08	Golden Valley (Golden Valley)
W38	No	PUBGx/ PEMA	Open Water/ wet (fresh) meadow	Type 5/ Type 2	3.08		Golden Valley (Golden Valley)
W39	No	PUBGx	Open Water	Type 5	2		Golden Valley (Golden Valley)
W40	No	PEM1A	Seas. flooded basin	Type 1	0.31		Golden Valley (Golden Valley)
W41	No	PEM1A	Seas. flooded basin	Type 1		0.19	Golden Valley (Golden Valley)
W42	No	PSS1A	Shrub Carr	Type 6		0.29	Golden Valley (Golden Valley) and Minneapolis (Minneapolis)
W44	No	PUBGx	Open Water	Type 5	0.87		Robbinsdale (Bassett Creek WMC)
W45	No	PFO1A	Floodplain forest	Type 1	2.05		Robbinsdale (Bassett Creek WMC)
W46	Yes	riverine	riverine	riverine	Not Applicable (linear)		
W46	No	PFO1A	Floodplain forest	Type 1	11.14		Golden Valley (Golden Valley)

Table 3
Summary of Basin Characteristics Delineated Within the Proposed BLRT Extension Project

Basin ID	Hydric Soil Map?	Field-Verified Cowardin	Eggers & Reed	Circ. 39 Class. [2]	Total Basin Size (ac)		Municipality (WCA LGU)
					natural basin	storm pond	
W47	No	PFO1A	Floodplain forest	Type 1	part of W46		Golden Valley (Golden Valley)
W48	No	R2UBGx	Riverine	Type 4	0.5		Minneapolis (Minneapolis)
W49	No	PFO1A	Floodplain forest	Type 1		0.08	Golden Valley (Golden Valley) /Minneapolis (Minneapolis)
W50	No	PEM1A	Seas. flooded basin	Type 1	0.12		Golden Valley (Golden Valley)
W51	Yes	PEMA	Seas. flooded basin	Type 1	4.59		Brooklyn Park (Shingle Creek WMC)
W52	Yes	PEMA	Seas. flooded basin	Type 1	0.05		Brooklyn Park (Shingle Creek WMC)
pond east of W30	No	PUBG	Open Water	Type 4		0.91	Robbinsdale (Shingle Creek WMC)

5.3 Regulatory Jurisdiction

Wetlands in the proposed BLRT Extension project area are regulated by several agencies at the local, state, and federal levels including the USACE and the EPA at the federal level, and the Minnesota Board of Water and Soil Resources (BWSR) and the Minnesota Pollution Control Agency (MPCA) at the state level. The proposed BLRT Extension project crosses several Wetland Conservation Act (WCA) LGUs. **Table 4** identifies the relevant WCA LGU for each delineated basin in the proposed BLRT Extension project area. **Table 4** also summarizes the jurisdiction of each delineated basin or aquatic resource in the proposed BLRT Extension project area per the WCA, the USACE, and the DNR. Any proposed work below the Ordinary High Water (OHW) elevation or in Public Waters, Public Waters Wetlands, or unnumbered Public Watercourses mapped by the Public Waters Inventory is regulated by the Minnesota Department of Natural Resources. In some cases, the DNR may decide to waive jurisdiction to the WCA LGU. This would be determined during the review of the DNR Public Waters Work Permit application which would be submitted electronically via the MPARS on-line interface.

The "***Technical Memorandum: Jurisdictional Issues Associated with Delineated Basins; Proposed BLRT Extension project***" discusses regulatory jurisdictional issues for each delineated basin in the proposed BLRT Extension project area. Typically, basins that were excavated from uplands for the conveyance or storage of stormwater are considered outside the scope of the WCA and are not regulated by WCA. Further, certain types of impacts to WCA jurisdictional basins are not regulated by the WCA, e.g. excavation impacts to Type 1 or 2 wetlands. Delineated basins may be USACE jurisdictional based on hydrologic connection with Waters of the US, a request for and approval of a Preliminary Jurisdictional Determination (JD), or affirmative findings in an Approved JD. **Table 4** summarizes impacts to wetlands and aquatic resources in the proposed BLRT Extension project area that are jurisdictional per the WCA, the USACE, and the DNR. Data in **Table 4** are based on concurrence with relevant WCA LGUs and the USACE.

Table 4 summarizes agency jurisdiction within the proposed BLRT Extension project area.

Table 4
Agency Jurisdiction of Basins Delineated Within the Proposed BLRT Extension Project Area

Basin ID	Hydric Soil Map?	Field-Verified Cowardin	Eggers & Reed	Circ. 39 Class. [2]	USACE Jurisdiction			WCA Jurisdiction	DNR Jurisdiction	Municipality (WCA LGU)
					Likely Juris. Waters and Streams	Non-WOUS (no mitigation required)	Isolated Basins (no mitigation required)			
W1	Yes	PEM1A	Seas. flooded basin	Type 1			yes	yes	no	Brooklyn Park (Shingle Creek WMC)
W2	Yes	PEM1A	Seas. flooded basin	Type 1			yes	yes	yes	Brooklyn Park (Shingle Creek WMC)
W3	Yes	PEM1A	Seas. flooded basin	Type 1			yes	yes	no	Brooklyn Park (Shingle Creek WMC)
W4	Yes	PEM1A	Seas. flooded basin	Type 1			yes	yes	no	Brooklyn Park (Shingle Creek WMC)
W5	Yes	PFO1A	Floodpl. forest	Type 1			yes	yes	no	Brooklyn Park (Shingle Creek WMC)
W6	Yes	PFO1A	Floodpl. forest	Type 1			yes	yes	no	Brooklyn Park (Shingle Creek WMC)
W7	Yes	PEM1A	Seas. flooded basin	Type 1			yes	yes	no	Brooklyn Park (Shingle Creek WMC)
W8	Yes	PFO1A	Floodpl. forest	Type 1			yes	yes	no	Brooklyn Park (Shingle Creek WMC)

Table 4

Agency Jurisdiction of Basins Delineated Within the Proposed BLRT Extension Project Area

Basin ID	Hydric Soil Map?	Field-Verified Cowardin	Eggers & Reed	Circ. 39 Class. [2]	USACE Jurisdiction			WCA Jurisdiction	DNR Jurisdiction	Municipality (WCA LGU)
					Likely Juris. Waters and Streams	Non-WOUS (no mitigation required)	Isolated Basins (no mitigation required)			
W9	Yes	PEM1A	Seas. flooded basin	Type 1			yes	yes	no	Brooklyn Park (Shingle Creek WMC)
W10	Yes	PEM1A	Seas. flooded basin	Type 1		yes		yes	no	Brooklyn Park (Shingle Creek WMC)
W11	Partially	PEM1A	Seas. flooded basin	Type 1			yes	yes	no	Brooklyn Park (Shingle Creek WMC)
W12	Yes	PEM1A	Seas. flooded basin	Type 1			yes	yes	no	Brooklyn Park (Shingle Creek WMC)
W13	Partially	PEM1A	Seas. flooded basin	Type 1			yes	yes	no	Brooklyn Park (Shingle Creek WMC)
W14	Yes	PUBGx	Deep Marsh	Type 4		yes		no	no	Brooklyn Park (Shingle Creek WMC)
W15	Yes	PSS1A	Shrub Carr	Type 6		yes		no	no	Brooklyn Park (Shingle Creek WMC)
W16	No	PUBGx	Deep Marsh	Type 4		yes		no	no	Brooklyn Park (Shingle Creek WMC)
W17	No	PSS1A	Shrub Carr	Type 6		yes		no	no	Brooklyn Park (Shingle Creek WMC)
W26	No	PEM1A	Seas. flooded basin	Type 1		yes		no	no	Brooklyn Park (Shingle Creek WMC)
W27	No	PEM1A	Seas. flooded basin	Type 1		yes		no	no	Brooklyn Park (Shingle Creek WMC)
W28	Yes	PFO1A	Floodpl. forest	Type 1	yes			yes	yes	Brooklyn Park (Shingle Creek WMC)
W29	Yes	PEM1C	Shallow Marsh	Type 3	yes			yes	no	Crystal (Crystal)
W30	No	PUBGx	Open Water	Type 5		yes		no	no	Robbinsdale (Shingle Creek WMC)

Table 4

Agency Jurisdiction of Basins Delineated Within the Proposed BLRT Extension Project Area

Basin ID	Hydric Soil Map?	Field-Verified Cowardin	Eggers & Reed	Circ. 39 Class. [2]	USACE Jurisdiction			WCA Jurisdiction	DNR Jurisdiction	Municipality (WCA LGU)
					Likely Juris. Waters and Streams	Non-WOUS (no mitigation required)	Isolated Basins (no mitigation required)			
W31	No	PSS1A	Shrub Carr	Type 6	yes			yes	yes	Robbinsdale (Bassett Creek WMC)
W32	No	PFO1A/ PEMC/ PSS1C	Floodpl. forest/ Shallow Marsh/ Shrub Carr	Type 1/ Type 3/ Type 6	yes			yes	yes	Robbinsdale (Bassett Creek WMC)
W33	No	PUBGx	Open Water	Type 5	yes			yes	yes	Robbinsdale (Bassett Creek WMC)
W34	Yes	PEM1F	Deep Marsh	Type 4	yes			yes	yes	Golden Valley (Golden Valley) and Robbinsdale (Bassett Creek WMC)
W35	No	PFO1A	Floodpl. forest	Type 1	yes			yes	no	Robbinsdale (Bassett Creek WMC)
W36	No	PSS1A	Shrub Carr	Type 6	yes			yes	no	Robbinsdale (Bassett Creek WMC)
W37	No	PEM1A	Seas. flooded basin	Type 1		yes		no	no	Golden Valley (Golden Valley)
W38	No	PUBGx/ PEMA	Open Water/ wet (fresh) meadow	Type 5/ Type 2			yes	yes	no	Golden Valley (Golden Valley)
W39	No	PUBGx	Open Water	Type 5			yes	yes	no	Golden Valley (Golden Valley)
W40	No	PEM1A	Seas. flooded basin	Type 1	yes			yes	no	Golden Valley (Golden Valley)
W41	No	PEM1A	Seas. flooded basin	Type 1		yes		no	no	Golden Valley (Golden Valley)

Table 4

Agency Jurisdiction of Basins Delineated Within the Proposed BLRT Extension Project Area

Basin ID	Hydric Soil Map?	Field-Verified Cowardin	Eggers & Reed	Circ. 39 Class. [2]	USACE Jurisdiction			WCA Jurisdiction	DNR Jurisdiction	Municipality (WCA LGU)
					Likely Juris. Waters and Streams	Non-WOUS (no mitigation required)	Isolated Basins (no mitigation required)			
W42	No	PSS1A	Shrub Carr	Type 6		yes		no	no	Golden Valley (Golden Valley) and Mpls (Mpls)
W44	No	PUBGx	Open Water	Type 5			yes	yes	no	Robbinsdale (Bassett Creek WMC)
W45	No	PFO1A	Floodpl. forest	Type 1			yes	yes	no	Robbinsdale (Bassett Creek WMC)
W46	Yes	riverine	riverine	riverine	yes			no	yes	
W46	No	PFO1A	Floodpl. forest	Type 1	yes			yes	no	Golden Valley (Golden Valley)
W47	No	PFO1A	Floodpl. forest	Type 1	yes			yes	yes	Golden Valley (Golden Valley)
W48	No	R2UBGx	Riverine	Type 4	yes			yes	no	Mpls (Mpls)
W49	No	PFO1A	Floodpl. forest	Type 1		yes		no	no	Golden Valley (Golden Valley) /Mpls (Mpls)
W50	No	PEM1A	Seas. flooded basin	Type 1	yes			yes	no	Golden Valley (Golden Valley)
W51	Yes	PEMA	Seas. flooded basin	Type 1	yes			yes	no	Brooklyn Park (Shingle Creek WMC)
W52	Yes	PEMA	Seas. flooded basin	Type 1			yes	yes	no	Brooklyn Park (Shingle Creek WMC)
pond east of W30	No	PUBG	Open Water	Type 4	yes			no	no	Robbinsdale (Shingle Creek WMC)

5.4 Aquatic Resources

A reach of Bassett Creek, in the vicinity of the Plymouth Avenue Bridge, would be re-located in order to accommodate the re-aligned freight rail, the proposed BLRT Extension project and the Minneapolis Park and Recreation Board multi-use recreational trail. See **Appendix B; sheet 5** (planview drawing) and **sheet 18** (cross-sectional drawing). This reach is approximately 450 feet long and would be moved 20 feet to the west. Appropriate BMPs, such as silt fences and silt curtains would be in-place during construction and post-construction phases in order to minimize potential siltation and sedimentation into receiving waters. This reach of Bassett Creek would be restored with appropriate techniques. Creek banks of the restored reach would be rapidly re-vegetated post-construction with appropriate seed mixes, plugs, and whips. Anchored jute mats (or equivalent stabilization materials) and rapid re-vegetation would be used on Bassett Creek banks to minimize erosion and siltation.

Bassett Creek, specifically reach ID 07010206 – 538 (Medicine Lake to the Mississippi River) is listed on the MPCA 2014 303(d) List of Impaired Waters. The impairments are Aquatic Life and Aquatic Recreation and the stressors are chloride and fecal coliform. The MPCA requires that water quality in a 303(d)-listed water cannot be made worse as a result of a proposed action.

5.5 Sequencing

5.5.1 Avoidance and Minimization

The proposed BLRT Extension project has been designed to avoid and minimize impacts to wetlands wherever possible. Wetland impacts cannot be completely avoided while still satisfying the primary needs of the proposed BLRT Extension project due to the number and location of wetland basins lying immediately adjacent to the proposed BLRT Extension project. Further, the location of the proposed BLRT Extension project trackage and the re-alignment of the BNSF freight rail is constrained by required track geometry and design guidelines.

The Final EIS No-Build assumes that the proposed BLRT Extension project would not be built; however, it also assumes that 5 major highway expansions and several local road projects would occur (See **Section 3.2**). Therefore, it is anticipated that there would be wetland and aquatic resource impacts in the absence of the proposed BLRT Extension project, though these potential impacts have not been quantified. The exact extent of impacts to wetlands and aquatic resources associated with these 5 major highway expansions and several local road projects are not known at this time.

The proposed BLRT Extension project does not have the least impacts to wetlands and aquatic resources among all build alternatives that were studied previously in the Draft EIS. However, per 404(b)(1) Guidelines, the current proposed BLRT Extension project was selected based on a best balance of social, economic and environmental issues.

In areas where impacts cannot be avoided, measures have been taken to minimize the wetland impacts. Design measures such as changes to the proposed BLRT Extension project profile, steeper side slopes and proposed elevated platforms on structure rather than fill have been designed in several areas to minimize impacts.

Best management practices such as erosion control and rapid re-vegetation during post-construction would help to minimize impacts to wetlands throughout the proposed BLRT Extension project area. Specific measures to avoid and minimize wetland impacts to individual wetlands within the proposed BLRT Extension project area are summarized below:

W1. All impacts to W1 have been avoided as a result of judicious location of the Operations and Maintenance Facility (OMF). One north-south oriented OMF alternative studied impacted a portion of W1. W1 is not depicted on the planset.

W2. W2 would not be impacted by the proposed BLRT Extension project and associated infrastructure. No alternatives were proposed that would have impacted W2. See **Appendix B**; sheet 14 of 30.

W3. All impacts to W3 have been avoided as a result of judicious location of the Operations and Maintenance Facility (OMF). One east-west oriented OMF alternative studied would have impacted a small portion of W3. W3 is not depicted on the planset.

W4. The entirety of W4 would be impacted as a result of the re-alignment of West Broadway Avenue North. See planset sheet 14 of 30 (**Appendix B**). Southbound West Broadway Avenue and northbound West Broadway Avenue separate in the vicinity of Oak Grove Parkway to form a wide boulevard which would accommodate several needed stormwater management features. Side slopes near W4 are 1v : 4h. The number of lanes, lane width and other road configuration characteristics of West Broadway Avenue are as required by the Highway Capacity Manual and the County State Aid Highway Design Manual. Impacts to W4 could not be avoided. See **Appendix B**; sheet 14 of 30.

W5. Impacts to W5 would be completely avoided. Wetland 5 is not depicted on the planset.

W6. Impacts to W6 would be completely avoided. See **Appendix B**; sheet 14 of 30.

W7. W7 would be impacted from reconstruction of Oak Grove Parkway and associated sidewalk and trail. See **Appendix B**; sheet 14 of 30. Proposed side slopes are 1v : 4h.

W8. A portion of W8 would be impacted as a result of the re-alignment of Oak Grove Parkway. The proposed trail / sidewalk associated with the re-alignment would impact the northernmost portion of W8. See **Appendix B**; sheet 15 of 30. Sideslopes near W8 are proposed at 1v : 4h.

W9. The northernmost portion (0.0012 ac) of W9 would be impacted as a result of the re-alignment of Oak Grove Parkway. Sideslopes near W9 are 1v : 4v. See **Appendix B**; sheet 15 of 30.

W10. W10, a roadside ditch, is adjacent to the existing alignment of West Broadway Avenue. This section of old West Broadway Avenue would be removed. Currently, W10 is not considered to be an impact. See **Appendix B**; sheet 15 of 30.

W11. Impacts to W11 would be completely avoided. See **Appendix B**; sheet 15 of 30.

W12. W12 would be impacted in entirety as a result of road fill impact associated with the northbound lanes of West Broadway Avenue North and cut impacts associated with stormwater management in the boulevard of West Broadway Avenue North. Side slopes near W12 were steepened to the extent practicable and are 1v : 3h; steeper side slopes would require guard rail. See **Appendix B**; sheet 14 of 30.

W13. The easternmost extent of W13 is impacted as a result of the re-alignment of 99th Avenue North and Oak Grove Parkway Station parking ramp. Impacts are associated with road fill and trail/ sidewalk fill. Sideslopes near W13 are 1v : 4h. See **Appendix B**; sheet 13 of 30.

W14. W14 is impacted as a result of the re-alignment of 99th Avenue North and Oak Grove Parkway and the construction of stormwater basins in the median of Oak Grove Parkway. Impacts include portions of road fill and trail/ sidewalk fill. Sideslopes near W14 are 1v : 4h. W14 is currently a stormpond. See **Appendix B**; sheet 13 of 30.

W15. Impacts to W15 would be completely avoided and were never part of any proposed BLRT Extension project alternative. Wetland 15 is not depicted on the planset.

W16. W16 would be impacted as a result of the proposed BLRT Extension project trackage that follows the west side of West Broadway Avenue from 94th Avenue northward. Impacts include track fill in the western portion and trail/ sidewalk fill in the eastern portion. W16 is a stormpond that would be replaced by a proposed stormpond immediately to the west. See **Appendix B**; sheet 12 of 30.

W17. W17, a stormpond, would not be impacted as a result of the proposed BLRT Extension project. See **Appendix B**; sheet 12 of 30.

W 18-25. W18 though W25 are part of the West Broadway Avenue (CSAH 103) Reconstruction project. Impacts to these wetlands would be discussed in the WCA/ Corps Joint permit application for that project. Wetlands 18-25 are not depicted on the planset.

W26. W26 would be impacted as a result of the reconstruction of West Broadway Avenue and a multi-use recreational trail. Wetland 26 is not depicted on the planset.

W27. W27 would not be impacted as a result of the proposed BLRT Extension project. No proposed alternatives would have impacted W27. Wetland 27 is not depicted on the planset.

W28. W28 would be impacted as a result fill associated with freight trackage and freight rail maintenance road, and cut impacts associated with compensatory floodplain volumes and stormwater capacity. Side slopes of the freight rail fill were steepened to the extent practicable (1v : 2h) to minimize fill footprint. See **Appendix B**; sheet 11 of 30.

W29. Impacts to W29 would be completely avoided as a result of the proposed BLRT Extension project. Wetland 29 is not depicted on the planset.

W30. Impacts to W30 would be completely avoided as a result of the proposed BLRT Extension project. Wetland 30 is not depicted on the planset.

W31. W31 is part of W32. See description of W32. See **Appendix B**; sheet 9 of 30.

W32. W32 would be temporarily impacted as a result of construction staging areas that would be required for construction of the light rail trackage and re-alignment of the freight rail. The temporary wetland impacts would be restored to pre-construction conditions and re-planted with appropriate native vegetation. Fuel for construction machinery would be secured to prevent spillage and potential water quality impacts. Infestations of invasive plant species in the staging area would be monitored and controlled as necessary. This size of the temporary impact area has been minimized to the extent practicable. See **Appendix B**; sheet 9 of 30.

W33. W33 (Grimes Pond) would be impacted as a result of the construction of the proposed BLRT Extension project trackage on a bridge over the west edge of Grimes Pond, temporary impacts required for the construction of the elevated platform, and cut impacts associated with maintaining stormwater capacity. The permanent impact has been conservatively calculated based on the area of the bridge platform. However, actual permanent fill impacts

would be the cumulative total cross-sectional footprint of the support piers for the platform, which is anticipated to be significantly less area. The overall impact to W33 has been significantly reduced from the Draft EIS phase of the proposed BLRT Extension project. In the Draft EIS Preferred Alternative, the freight rail and LRT would have been reconstructed on a new embankment that would have increased the amount of fill required in W33. See **Appendix B**; sheet 9 of 30.

W34. W34 would not be impacted as a result of the proposed BLRT Extension project. See **Appendix B**; sheet 8 of 30.

W35. W35 would be impacted partially by track fill associated with the freight rail re-alignment and track cut associated with storm volume compensation. Side slopes of the freight rail track fill would be 1v : 2h. A corridor protection wall separates the freight rail alignment from the proposed BLRT Extension project trackage. The corridor protection wall is needed in any section of trackage where the distance between the freight rail centerline is less than 35 feet from the centerline of the southbound proposed BLRT Extension project trackage. Thus, the corridor protection wall serves to minimize the overall footprint of the shared freight/ proposed BLRT Extension project trackage and minimizes wetland impacts while providing safe operation of the freight rail and the proposed BLRT Extension project. See **Appendix B**; sheet 8 of 30.

W36. W36 would be impacted by the proposed BLRT Extension project trackage fill. Side slopes would be 1v : 2h. The corridor protection wall between the freight rail and the proposed BLRT Extension project tracks would serve to minimize the overall footprint of the freight/ proposed BLRT Extension project alignment and minimize wetland impacts to W36. See **Appendix B**; sheet 8 of 30.

W37. W37 would be completely impacted as a result of unavoidable track fill. W37 is a low quality ditch that lies between Kewanee Way and the proposed BLRT Extension project corridor. See **Appendix B**; sheet 7 of 30.

W38. W38 would not be impacted as a result of the proposed BLRT Extension project. Previous design iterations had a small trail-related impact to W38; however, this impact has been eliminated by moving the trail westward. In the Draft EIS phase of the proposed BLRT Extension project, the freight rail embankment would have been reconstructed west of its current location, requiring placement of fill in W38. See **Appendix B**; sheet 6 of 30.

W39. W39 would be impacted as a result of proposed BLRT Extension project trackage fill associated with a bridge platform along the west edge of the wetland. W39 would also have temporary impacts associated with construction of the bridge platform. W39 would also be impacted as a result of cut impacts associated with storm volume compensation. The permanent impact has been conservatively calculated based on the area of the bridge platform. However, actual permanent fill impacts would be the cumulative total cross-sectional footprint of the support piers for the platform, which is anticipated to be significantly less area. The overall impact to W39 has been significantly reduced from the Draft EIS phase of the proposed BLRT Extension project. In the Draft EIS Preferred Alternative, the freight rail and LRT would have been reconstructed on a new embankment that would have increased the amount of fill required in W39. See **Appendix B**; sheet 6 of 30.

W40/ W50. W40/W50 would be impacted as a result of proposed BLRT Extension project trackage fill and excavation impacts associated with compensatory stormwater volumes. Side slopes near W40/W50 would be 1v : 2h. The footprint of the overall freight/ proposed BLRT Extension project alignment has been minimized in the southern portion of W40 and

along all of W50 with a corridor protection wall; however, the entire W40/W50 would be unavoidably impacted. See **Appendix B**; sheet 5 of 30.

W41. W41 would be completely impacted by the Plymouth Avenue Station and track fill. A corridor protection wall serves to minimize the shared freight/ proposed BLRT Extension project alignment; however, all of W41 would be unavoidable impacted. See **Appendix B**; sheet 5 of 30.

W42. W42 would be completely impacted by proposed BLRT Extension project trackage fill. Side slopes near W42 are at 1v : 2h; however, impacts to W42 are unavoidable. See **Appendix B**; sheet 4 of 30.

W43. W43 is part of the West Broadway Avenue (CSAH 103) Reconstruction and would be discussed in the WCA/ Corps Joint Permit Application for that project. Wetland 43 is not depicted in the planset.

W44. W44 would be completely impacted as a result of track fill associated with the proposed BLRT Extension project. Side slopes near W44 are 1v : 2h. A corridor protection wall minimizes the footprint of the overall freight/ proposed BLRT Extension project alignment near the southern end of W44. Despite these characteristics that minimize footprint; impacts to W44 are unavoidable. See **Appendix B**; sheet 10 of 30.

W45. W45 would be impacted as a result of freight rail track fill and freight rail track cut. Side slopes near W45 are 1v : 2h. A corridor protection wall and a retaining wall separate freight rail from the proposed BLRT Extension project alignment in the southern portion of W45 thus serving to minimize the overall footprint of the shared rail alignment. Wetland impacts to W45 have been minimized to the extent practicable. See **Appendix B**; sheet 10 of 30.

W46. A portion W46 is the channel of Bassett Creek (riverine) and another portion is the palustrine wetland fringe along Bassett Creek. A ~450 foot reach of Bassett Creek near the Plymouth Avenue Bridge would be relocated approximately 20 feet to the west. Best management practices would be used to maintain acceptable water quality in Bassett Creek during the construction and post-construction period. The palustrine portion of W46 would be impacted by freight rail track fill and trail-related fill. The side slopes near W46 are 1v : 3h. Retaining walls and corridor protection walls have been used to minimize the footprint of the shared freight/ proposed BLRT Extension project alignment to the extent practicable. The impacts to W46 have been calculated conservatively; a portion of impacts to W46 are beneath the existing (and proposed) Plymouth Avenue Bridge and may not have the complete fill footprint as depicted in the planset. See **Appendix B**; sheet 5 of 30.

W47. W47 is the southern extension of W46. Impacts to W47 are included in the impact description for W46. See **Appendix B**; sheet 5 of 30.

W48. W48 would be impacted with fill associated with reconstruction of the BNSF freight rail, associated freight rail maintenance road, proposed BLRT Extension project trackage and a pedestrian sidewalk along Olson Memorial Highway. Additionally, portions of W48 would be temporarily impacted during the construction period. Side slopes near W48 are 1v : 2h. Retaining walls are proposed along the east and west sides of the shared freight/ proposed BLRT Extension project alignment and a corridor protection wall is proposed separating the freight rail from the proposed BLRT Extension project. The retaining walls and corridor protection walls serve to minimize the footprint of the shared rail alignment and thus minimizes impacts to wetlands to the extent practicable. See **Appendix B**; sheet 3 of 30.

W49. W49 would be partially impacted as a result of freight rail track fill. Side slopes near W49 are 1v : 2h. Impacts to W49 were minimized to the extent practicable. W49 is a disturbed ditch that lies between the existing BNSF and CP freight rail tracks. See **Appendix B**; sheet 4 of 30.

W50. See impact description for W40/ W50. See **Appendix B**; sheet 5 of 30.

W51. W51 is part of a wetland mitigation site constructed by the Target Corporation in the early 2000s as compensation for wetlands impacted from construction of the corporate campus. W51 would be impacted as a result of road fill and trail/ sidewalk fill. Side slopes near W51 are 1v : 4h. Impacts to W51 were minimized to the extent practicable. See **Appendix B**; sheet 14 of 30.

W52. W52, located on the south side of 101st Avenue North, would be impacted as a result of road fill and stormwater pond cut as a result of the Operations and Maintenance Facility (OMF). W52 would be completely impacted unavoidably. See **Appendix B**; sheet 16 of 30.

5.5.2 Wetland Impacts

Considering all basins that were delineated within the proposed BLRT Extension project area, total fill impacts are 8.4832 ac, total cut impacts are 1.4762 ac, total temporary impacts are 3.2284 ac. Combined fill, cut and temporary impacts are 13.1878 ac. Some of these impacts would not require mitigation as a result of agency jurisdiction or if they would be temporary impacts.

Table 5 is a summary of wetland impacts by wetland type for the proposed BLRT Extension project. **Table 6** shows a more detailed description of wetland impacts; including cut impacts, fill impacts, and temporary impacts, and mitigation requirements for wetlands within the proposed BLRT Extension project area.

Table 5
Summary of Wetland Impacts by Wetland Type

Wetland Type	Total Impacts (ac)	Impacts Requiring Mitigation for WCA (ac)	Impacts Requiring Mitigation for USACE (ac)
1	6.5824	4.2731	2.5166
2	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000
4	2.4892	0.0138	1.0138
5	3.6152	1.6922	0.4950
6	0.5010	0.2124	0.2124
Riverine (linear feet)	450 linear feet (Bassett Creek)	450 linear feet (Bassett Creek)	450 linear feet (Bassett Creek)
Total Acres (Wetland)	**13.1878**	**6.2815**	**4.1623**
Total Linear feet (Riverine)	**450 linear feet (Bassett Creek)**	**450 linear feet (Bassett Creek)**	**450 linear feet (Bassett Creek)**

Table 6 Summary of Wetland Impacts, Jurisdictions and Mitigation Requirements

Basin ID	Updated NWI [1]	Hydric Soil Map?	Field-Verified Cowardin	Eggers & Reed	Circ. 39 Class. [2]	Total Basin Size (ac)		USACE Jurisdiction			WCA Juris.	MnDNR Juris.	Impact Type						Mitigation Ratio (2:1)	WCA Mitigation Requirements (ac)	Corps Mitigation requirements (ac)	Municip. (WCA LGU)
						natural basin	storm pond	Likely Juris. Waters and Streams	Non-WOUS (no mitigation required)	Isolated Basins (no mitgation required)			Fill impact (ac)	Cut impact (ac)	Temp. Impact (ac)	Total Impact (ac)	Total WCA Mitigatable Impacts (ac)	Total Corps Mitigatable Impacts (ac)				
W1	PEM1A	Yes	PEM1A	Seas. flooded basin	Type 1	1.59				yes	yes	no	0	0	0	0	0	0	2 to 1	0	0	Brooklyn Park (Shingle Creek WMC)
W2	PEM1C	Yes	PEM1A	Seas. flooded basin	Type 1	1.37				yes	yes	yes	0	0	0	0	0	0	2 to 1	0	0	Brooklyn Park (Shingle Creek WMC)
W3	PEM1A	Yes	PEM1A	Seas. flooded basin	Type 1	1.23				yes	yes	no	0	0	0	0	0	0	2 to 1	0	0	Brooklyn Park (Shingle Creek WMC)
W4	Not mapped	Yes	PEM1A	Seas. flooded basin	Type 1	0.14				yes	yes	no	0.1357	0	0	0.1357	0.1357	0	2 to 1	0.2714	0	Brooklyn Park (Shingle Creek WMC)
W5	PFO1A	Yes	PFO1A	Floodplain forest	Type 1	0.07				yes	yes	no	0	0	0	0	0	0	2 to 1	0	0	Brooklyn Park (Shingle Creek WMC)
W6	PFO1A	Yes	PFO1A	Floodplain forest	Type 1	0.14				yes	yes	no	0	0	0	0	0	0	2 to 1	0	0	Brooklyn Park (Shingle Creek WMC)
W7	PEM1A	Yes	PEM1A	Seas. flooded basin	Type 1	0.55				yes	yes	no	0.2869	0	0	0.2869	0.2869	0	2 to 1	0.5738	0	Brooklyn Park (Shingle Creek WMC)
W8	PFO1A	Yes	PFO1A	Floodplain forest	Type 1	0.14				yes	yes	no	0.0254	0	0	0.0254	0.0254	0	2 to 1	0.0508	0	Brooklyn Pk (Shingle Creek WMC)
W9	Not mapped	Yes	PEM1A	Seas. flooded basin	Type 1	0.18				yes	yes	no	0.0012	0	0	0.0012	0.0012	0	2 to 1	0.0024	0	Brooklyn Park (Shingle Creek WMC)
W10	Not mapped	Yes	PEM1A	Seas. flooded basin	Type 1		0.06		yes		yes	no	0	0	0	0	0	0	2 to 1	0	0	Brooklyn Park (Shingle Creek WMC)
W11	PEM1A	Partially	PEM1A	Seas. flooded basin	Type 1	1.06				yes	yes	no	0	0	0	0	0	0	2 to 1	0	0	Brooklyn Park (Shingle Creek WMC)
W12	Not mapped	Yes	PEM1A	Seas. flooded basin	Type 1	0.06				yes	yes	no	0.0233	0.0332	0	0.0565	0.0233	0	2 to 1	0.0466	0	Brooklyn Park (Shingle Creek WMC)
W13	PEM1A	Partially	PEM1A	Seas. flooded basin	Type 1	2.41				yes	yes	no	0.5333	0	0	0.5333	0.5333	0	2 to 1	1.0666	0	Brooklyn Park (Shingle Creek WMC)

Table 6 Summary of Wetland Impacts, Jurisdictions and Mitigation Requirements

Basin ID	Updated NWI [1]	Hydric Soil Map?	Field-Verified Cowardin	Eggers & Reed	Circ. 39 Class. [2]	Total Basin Size (ac)		USACE Jurisdiction			WCA Juris.	MnDNR Juris.	Impact Type						Mitigation Ratio (2:1)	WCA Mitigation Requirements (ac)	Corps Mitigation requirements (ac)	Municip. (WCA LGU)
						natural basin	storm pond	Likely Juris. Waters and Streams	Non-WOUS (no mitigation required)	Isolated Basins (no mitgation required)			Fill impact (ac)	Cut impact (ac)	Temp. Impact (ac)	Total Impact (ac)	Total WCA Mitigatable Impacts (ac)	Total Corps Mitigatable Impacts (ac)				
W14	PEM1A	Yes	PUBGx	Deep Marsh	Type 4		0.61		yes		no	no	0.6058	0	0	0.6058	0	0	2 to 1	0	0	Brooklyn Park (Shingle Creek WMC)
W15	Not mapped	Yes	PSS1A	Shrub Carr	Type 6		0.79		yes		no	no	0	0	0	0	0	0	2 to 1	0	0	Brooklyn Park (Shingle Creek WMC)
W16	PUBGx/ PEM1C	No	PUBGx	Deep Marsh	Type 4		0.82		yes		no	no	0.8194	0	0	0.8194	0	0	2 to 1	0	0	Brooklyn Pk (Shingle Creek WMC)
W17	Not mapped	No	PSS1A	Shrub Carr	Type 6		0.05		yes		no	no	0	0	0	0	0	0	2 to 1	0	0	Brooklyn Park (Shingle Creek WMC)
W26	Not mapped	No	PEM1A	Seas. flooded basin	Type 1		0.01		yes		no	no	0.01	0	0	0.01	0	0	2 to 1	0	0	Brooklyn Park (Shingle Creek WMC)
W27	PEM1C	No	PEM1A	Seas. flooded basin	Type 1		0.62		yes		no	no	0	0	0	0	0	0	2 to 1	0	0	Brooklyn Park (Shingle Creek WMC)
W28	PABGx/ PEM1C	Yes	PFO1A	Floodplain forest	Type 1	2.57		yes			yes	yes	0.2821	0.1482	0	0.4303		0.4303	2 to 1	0	0.8606	Brooklyn Park (Shingle Creek WMC)
W29	PEM1C	Yes	PEM1C	Shallow Marsh	Type 3		1.02	yes			yes	no	0	0	0	0	0	0	2 to 1	0	0	Crystal (Crystal)
W30	PUBG/ PEM1A	No	PUBGx	Open Water	Type 5		1.2		yes		no	no	0	0	0	0	0	0	2 to 1	0	0	Robbinsdale (Shingle Creek WMC)
W31	PSS1A	No	PSS1A	Shrub Carr	Type 6	Part of W32		yes			yes	yes	0	0	0	0	0	0	2 to 1	0	0	Robbinsdale (Bassett Creek WMC)
W32	PFO1A	No	PFO1A/ PEMC/ PSS1C	Floodplain forest/ Shallow Marsh/ Shrub Carr	Type 1/ Type 3/ Type 6	7.71		yes			yes	yes	0	0	1.2544	1.2544	0	0	2 to 1	0	0	Robbinsdale (Bassett Creek WMC)
W33	PABG	No	PUBGx	Open Water	Type 5	7.41		yes			yes	yes	0.3464	0.0731	1.2725	1.692	0.4195	0.4195	2 to 1	0.839	0.839	Robbinsdale (Bassett Crk WMC)
W34	PEM1F/ PABG	Yes	PEM1F	Deep Marsh	Type 4	17.01		yes			yes	yes	0	0	0	0	0	0	2 to 1	0	0	Golden Valley (Golden

Table 6 Summary of Wetland Impacts, Jurisdictions and Mitigation Requirements

Basin ID	Updated NWI [1]	Hydric Soil Map?	Field-Verified Cowardin	Eggers & Reed	Circ. 39 Class. [2]	Total Basin Size (ac)		USACE Jurisdiction			WCA Juris.	MnDNR Juris.	Impact Type						Mitigation Ratio (2:1)	WCA Mitigation Requirements (ac)	Corps Mitigation requirements (ac)	Municip. (WCA LGU)
						natural basin	storm pond	Likely Juris. Waters and Streams	Non-WOUS (no mitigation required)	Isolated Basins (no mitgation required)			Fill impact (ac)	Cut impact (ac)	Temp. Impact (ac)	Total Impact (ac)	Total WCA Mitigatable Impacts (ac)	Total Corps Mitigatable Impacts (ac)				
																						Valley) and Robbinsdale (Bassett Creek WMC)
W35	PEM1F	No	PFO1A	Floodplain forest	Type 1	0.85		yes			yes	no	0.3639	0.0394	0	0.4033	0.4033	0.4033	2 to 1	0.8066	0.8066	Robbinsdale (Bassett Creek WMC)
W36	PSS1A	No	PSS1A	Shrub Carr	Type 6	1.39		yes			yes	no	0.2124	0	0	0.2124	0.2124	0.2124	2 to 1	0.4248	0.4248	Robbinsdale (Bassett Creek WMC)
W37	Not mapped	No	PEM1A	Seas. flooded basin	Type 1		0.08		yes		no	no	0.0755	0	0	0.0755	0	0	2 to 1	0	0	Golden Valley (Golden Valley)
W38	PFO1A/ PABG	No	PUBGx/ PEMA	Open Water/ wet (fresh) meadow	Type 5/ Type 2	3.08				yes	yes	no	0	0	0	0	0	0	2 to 1	0	0	Golden Valley (Golden Valley)
W39	PFO1A	No	PUBGx	Open Water	Type 5	2				yes	yes	no	0.398	0.0025	0.6505	1.051	0.4005	0	2 to 1	0.801	0	Golden Valley (Golden Valley)
W40	PFO1A	No	PEM1A	Seas. flooded basin	Type 1	0.31		yes			yes	no	0.3006	0.0121	0	0.3127	0.3127	0.3127	2 to 1	0.6254	0.6254	Golden Valley (Golden Valley)
W41	Not mapped	No	PEM1A	Seas. flooded basin	Type 1		0.19		yes		no	no	0.1917	0	0	0.1917	0	0	2 to 1	0	0	Golden Valley (Golden Valley)
W42	Not mapped	No	PSS1A	Shrub Carr	Type 6		0.29		yes		no	no	0.2886	0	0	0.2886	0	0	2 to 1	0	0	Golden Valley (Golden Valley) and Mpls (Mpls)
W44	PABG	No	PUBGx	Open Water	Type 5	0.87				yes	yes	no	0.8722	0	0	0.8722	0.8722	0	2 to 1	1.7444	0	Robbinsdale (Bassett Creek WMC)
W45	Not mapped	No	PFO1A	Floodplain forest	Type 1	2.05				yes	yes	no	1.1982	0.1483	0	1.3465	1.1982	0	2 to 1	2.3964	0	Robbinsdale (Bassett Creek WMC)
W46	riverine	Yes	riverine	riverine	riverine	N/A		yes			no	yes	0	0	0	0	0	0	2 to 1	0	0	
W46	PFO1A	No	PFO1A	Floodplain forest	Type 1	11.14		yes			yes	no	0.9799	0.0633	0.0008	1.044	0.9799	1.0432	2 to 1	1.9598	2.0864	Golden Valley (Golden Valley)

Table 6 Summary of Wetland Impacts, Jurisdictions and Mitigation Requirements

Basin ID	Updated NWI [1]	Hydric Soil Map?	Field-Verified Cowardin	Eggers & Reed	Circ. 39 Class. [2]	Total Basin Size (ac)		USACE Jurisdiction			WCA Juris.	MnDNR Juris.	Impact Type						Mitigation Ratio (2:1)	WCA Mitigation Requirements (ac)	Corps Mitigation requirements (ac)	Municip. (WCA LGU)
						natural basin	storm pond	Likely Juris. Waters and Streams	Non-WOUS (no mitigation required)	Isolated Basins (no mitgation required)			Fill impact (ac)	Cut impact (ac)	Temp. Impact (ac)	Total Impact (ac)	Total WCA Mitigatable Impacts (ac)	Total Corps Mitigatable Impacts (ac)				
W47	PEM1C	No	PFO1A	Floodplain forest	Type 1	Part of W46		yes			yes	yes	0	0	0	0	0	0	2 to 1	0	0	Golden Valley (Golden Valley)
W48	R2UBG	No	R2UBGx	Riverine	Type 4	0.5		yes			yes	no	0.1038	0	0.0502	0.154	0.1038	0.1038	2 to 1	0.2076	0.2076	Mpls (Mpls)
W49	PFO1A	No	PFO1A	Floodplain forest	Type 1		0.08		yes		no	no	0.1018	0	0	0.1018	0	0	2 to 1	0	0	Golden Valley (Golden Valley) /Mpls (Mpls)
W50	PFO1A	No	PEM1A	Seas. flooded basin	Type 1	0.12		yes			yes	no	0.1176	0	0	0.1176	0.1176	0.1176	2 to 1	0.2352	0.2352	Golden Valley (Golden Valley)
W51	PEMA	Yes	PEMA	Seas. flooded basin	Type 1	4.59		yes			yes	no	0.2095	0	0	0.2095	0.2095	0.2095	2 to 1	0.419	0.419	Brooklyn Park (Shingle Creek WMC)
W52	not mapped	Yes	PEMA	Seas. flooded basin	Type 1	0.01				yes	yes	no	0	0.0461	0	0.0461	0.0461	0	2 to 1	0.0922	0	Brooklyn Park (Shingle Creek WMC)
pond east of W30	PUBG	No	PUBG	Open Water	Type 4		0.91	yes			no	no	0	0.91	0	0.91	0	0.91	2 to 1	0	1.82	Robbinsdale (Shingle Creek WMC)
Total						**70.55**	**6.73**						**8.4832**	**1.4762**	**3.2284**	**13.1878**	**6.2815**	**4.1623**	**2 to 1**	**12.563**	**8.3246**	

5.5.3 Other Aquatic Resource Impacts

The DNR is responsible for all public waters and public waters wetlands in the proposed BLRT Extension project area. Public Waters are depicted on **Figures 2 and 3**. A Public Waters Work Permit application would be submitted to the DNR via the MPARS on-line tool. The DNR may choose to waive jurisdiction of Public Waters to WCA during the permit review period. A summary of public waters and proposed impacts in the proposed BLRT Extension project area is as follows:

- **Unnumbered Public Watercourse**. Culverted outlet from W28. See **Figure 2**. Impacts to W28 are discussed in **Section 5.5.1** and in **Table 6**.
- **Public Water Wetland 644W**. Grimes Pond (Wetland # 33) and North Rice Pond (Wetland #32). See **Figure 2**. Impacts to W33 and 32 are discussed in **Section 5.5.1** and in **Table 6**.
- **Public Water 651P**. Backwater of Bassett Creek associated with Wetland #46, just north of the Plymouth Avenue bridge. See **Figure 2**. Impacts to W46 are discussed in **Section 5.5.1** and in **Table 6**.
- **Unnumbered Public Water Watercourse**. Bassett Creek near the Plymouth Avenue bridge (associated with Wetland #46) and associated with Wetland #48 near the intersection of the BNSF freight rail and Olson Memorial Highway. See **Figure 2**. Impacts to W46 and W48 are discussed in **Section 5.5.1** and in **Table 6**.

5.6 Proposed Mitigation

5.6.1 Objective

Impacts to wetlands and aquatic resources would occur in Bank Service Area (BSA) 7 and Major Watershed 20 (Mississippi River – Twin Cities). All impacts are in Hennepin County, within the 7-County Metro area and within the "<50%" zone". The objective of the mitigation strategy is to find a combination of suitable credits from bank accounts within BSA 7 and within the "<50%" zone and on-site wetland mitigation opportunities. For wetland impacts that are non USACE jurisdictional, the Council proposes to purchase credits for suitable wetland banks that are not USACE-approved and to some extent with credits deriving from on-site mitigation opportunities. For those wetland impacts that are USACE jurisdictional, the Council proposes a combination of the purchase of USACE-approved credits and augmented with some on-site mitigation opportunities.

A 2:1 mitigation ratio is currently assumed given that proposed mitigation (purchased credits or on-site opportunities) can likely meet 2 of the 3 USACE requirements that incrementally reduce mitigation from a base of 2.5:1. Credits purchases would begin within Hennepin County and, as needed, expand to other counties within BSA 7 and within the "<50% Zone". **Table 6** provides a summary of wetland impact, wetland type, impact type, and mitigation requirements.

Mitigation opportunities are summarized below:

- **Private Mitigation Bank Credits**. Suitable wetland banks that are within BSA 7 and within the "<50%" zone are located in Hennepin County, a portion of Carver County and a portion of Washington County. Credits that are USACE-approved would be purchased for impacts to wetlands that are determined to be USACE jurisdictional. Conversely, credits that are non USACE-approved would be used to mitigate for impacts to wetlands that are determined to be not USACE jurisdictional. The proposed wetland mitigation follows the approach in the *St. Paul District Policy for Wetland Compensatory Mitigation in Minnesota* (USACE 2009) and the Minnesota WCA Rule as amended in August 2009. A summary of suitable and currently available banked credits is as follows:
    - **USACE-Approved Credits**. Currently, there are approximately 23 acres of USACE-approved wetland credits (including various wetland types and upland credits) available in either Hennepin County or in the BSA 7 portion of Carver County (all within the "<50%" zone).
    - **Non USACE-Approved Credits**. Currently, there are approximately 18 acres of Non USACE-approved wetland credits (including various wetland types and upland credits) available in either Hennepin County or in the BSA 7 portion of Carver County (all within the "<50%" zone).
- **On-site Wetland Mitigation Opportunities**. Several areas within or adjacent to the proposed BLRT Extension project area have been identified that would provide on-site wetland mitigation. These areas are Theodore Wirth Regional Park, the former Joyner's Golf Course (W22), and the North Hennepin Community College and several small expansions of existing wetland boundaries (W28 and W39). See **Appendix D** for a conceptual drawing of the Theodore Wirth Regional Park site. See **Figure 2 (page 7)** for the W22 site and North Hennepin Community College site. See **Appendix B** (planset) for details on expansions to W28 and W39.

- **Theodore Wirth Regional Park**. This on-site mitigation area is located in the northwest quadrant of the intersection of the BNSF freight rail corridor and Olson Memorial Highway. See **Figure 2**. This site is adjacent to Bassett Creek and is currently overlain in part by fill composed of concrete rubble. With fill removal, grading and native vegetation establishment, this site would provide required floodplain mitigation as well as wetland mitigation. Portions of this area would be excavated to intercept the water table and form a mosaic of wetland types 1, 2, 3 and 6. Plantings within proposed wetland would be appropriate seed mixes, plugs and whips. Upland prairie buffer would be established above the established wetland boundary. It is estimated that this area could yield approximately 1.50 acres of on-site wetland credits.

- **Former Joyner's Golf Course (W22).** The former Joyner's Golf Course was planned to be converted to a wetland mitigation bank in the early 2000s. See **Figure 2** for location. Details of the agency coordination for this process would be discussed in detail in the WCA/ Corps Joint Permit Application for the West Broadway Avenue (CSAH 103) Reconstruction project (Hennepin County). The state and federal agency process for establishing a wetland bank here was abandoned in 2007 as a result of the economic downturn that adversely impacted building construction. The intent was to re-meander Shingle Creek through the former golf course; however, the straightened reach of Shingle Creek was never connected via ditches or culverts to the re-meander. Some work was completed at the site before it was abandoned; however, it was never vegetated according to the planting plan and monitoring was never initiated. The Council proposes to establish direct (permittee responsible) wetland replacement credits on the site for use as mitigation for proposed BLRT Extension project. The Council would coordinate with Hennepin County should it be determined that a portion of the replacement wetland credits would be used as mitigation for the West Broadway Avenue (CSAH 103) Reconstruction project wetland impacts. If the presence of the former golf course establishes a previous upland condition, then it is assumed that the area could yield wetland creation; at 75% credit, or approximately 5-7 acres of credit. If the wetlands present on-site prior to the construction of the golf course are considered to be the baseline, then the area would yield wetland restoration; at 100% credit, or approximately 8-10 acres of credit. Currently the re-meander through the former golf course is not connected to the straightened reach of Shingle Creek. It would be a matter of discussion with the USACE as to whether proposed mitigation activities at the former golf course could become Corps-approved credits or not.

- **Various Proposed Expansions of Existing wetland in the Proposed BLRT Extension Project Area.** A small expansion of the boundaries of W39 (See **Appendix B, Sheet 6**) would increase the size of the wetland by approximately 0.092 acres. The expansion area associated with W28 is 0.5871 acres. A percentage of the expansion areas associated with W39 and W28 may be creditable as wetland creation or upland buffer.

It is anticipated that 4.1623 acres of wetland impact would require replacement to meet the USACE requirements set forth in the 2008 Federal Mitigation Rule and *St. Paul District Policy for Wetland Compensatory Mitigation in Minnesota* (USACE 2009). The USACE base compensation ratios for wetland replacement are typically at a 2.5: 1 ratio. Depending on factors of whether replacement can be achieved in-kind, in-place, and/or in-advance, the compensation ratio can be decreased at incremental steps of 0.25:1 to achieve a smaller compensation ratio. The Council anticipates that a mitigation ratio of 2:1 can be achieved based on the likelihood that at least 2 of the factors above can be met.

Total wetland impacts are 13.1878 ac. The portion of the total wetland impacts that are WCA jurisdictional is 6.2815 ac. The portion of the total wetland impacts that are USACE jurisdictional is 4.1623 ac. Assuming a 2:1 mitigation ratio for WCA would require 12.563 ac of wetland mitigation. Assuming a 2:1 mitigation ratio for USACE would require 8.3246 ac of wetland mitigation. It is estimated that on-site wetland mitigation opportunities within the proposed BLRT Extension project area could yield ~5 acres of wetland credit (including upland buffers). The remainder (7.563 ac for WCA and 3.3246 ac for the USACE) of mitigation needs could be purchased from suitable private wetland mitigation banks. Characteristics of on-site mitigation opportunities are summarized in **Table 7**. Available credits in existing wetland banks, some Corps -approved and some non Corps-approved, are summarized in **Table 8**.

5.6.2 Site Selection

On-site mitigation opportunities within and near the proposed BLRT Extension project area are somewhat constrained. The northern third of the proposed BLRT Extension project area, roughly coincident with the city of Brooklyn Park, is on the southern fringe of the Anoka Sand Plain. Here, water tables have dropped dramatically in the past half century requiring excessive soil removal to intercept the perched water table and make mitigation feasible. Even with deep excavation, the anticipated wetland hydrology is at risk of failure in the long term. The southern two-thirds of the proposed BLRT Extension project are largely constrained by existing development. However, given these constraints, several on-site mitigation opportunities have been located and are summarized in **Table 7**.

Table 7
Summary of On-Site Wetland Mitigation Opportunities

On-Site Mitigation Opportunity	Location	Reference to Figure or Drawing	Relation to Impacts
Theodore Wirth Regional Park	West of the proposed BLRT Extension project and just north of Olson Memorial Highway	See **Appendix D**; see concept drawing	Within same Major Watershed and BSA of impacts within the proposed BLRT Extension project.
Bassett Creek relocation (Water of the US)	450 feet of Bassett Creek near the Plymouth Avenue Bridge	See **Appendix B**; Sheets 4 of 26 (planview) and 14 of 26 (cross-section)	New channel 20 feet to the west of old channel.
Expansion of southeast corner of	East side of proposed	See **Appendix B**; Sheet 5 of 26	Adjacent to Wetland 39

Table 7 Summary of On-Site Wetland Mitigation Opportunities			
On-Site Mitigation Opportunity	Location	Reference to Figure or Drawing	Relation to Impacts
Wetland 39	BLRT Extension project and just north of Golden Valley Road		
Expansion of southern and western edge of Wetland 28	West side of proposed BLRT Extension project and just north of 62nd Ave North	See **Appendix B**; sheet 9 of 26	Adjacent to Wetland 28.
Former Joyners Golf Course	West side of West Broadway Ave (city of Brooklyn Park) and just north of Shingle Creek	See **Figure 2 and 3** (page 7)	Delineated as Wetland 22 (within the West Broadway Avenue (CSAH 103) Reconstruction project. Previous planning was nearly completed for a wetland mitigation bank at this site. Subject of agency coordination to seek concurrence that this site, under appropriate conditions, could provide direct replacement credits for the proposed BLRT Extension project.

Private wetland bank credits that would be suitable as mitigation for impacts within the proposed BLRT Extension project are summarized in **Table 8**. All suitable credits are in BSA 7 and in the "<50%" portion of the State. Available credits change over time. A draft Purchase Agreement for selected bank credits would be submitted to the TEP and the USACE as the permitting process matures.

Table 8 Summary of Private Wetland Mitigation Bank Credit Opportunities				
County	Bank Acct.	BSA, Zone, Major Watershed)	USACE Approved?	Wetland Types (ac) Available
Hennepin	**#1171**	BSA 7, <50%, 20	Yes	3 (1.27)
Hennepin	**#1310**	BSA 7, <50%, 19	No	2 (0.4), 3 (0.557), 6 (1.883)
Hennepin	**#1361**	BSA 7, <50%, 18	No	2 (0.3273), 3 (2.5341), U (0.846)
Hennepin	**#1414**	BSA 7, <50%, 19	Yes	3 (0.2238) 4 (0.3927) U (0.2679)
Hennepin	**#1518**	BSA 7, <50%, 20	Yes	1 (0.9216) 2 (0.904)

Table 8 Summary of Private Wetland Mitigation Bank Credit Opportunities				
County	Bank Acct.	BSA, Zone, Major Watershed)	USACE Approved?	Wetland Types (ac) Available
				4 (0.344)
Hennepin	**#1518**	BSA 7, <50%, 20	No	2 (3.974)
Hennepin	**#1546**	BSA 7, <50%, 18	No	2 (1.02) 3 (0.35)
Hennepin	**#1560**	BSA 7, <50%, 20	No	2 (2.42) 3 (0.26) U (0.24)
Carver	**#1375**	BSA 7, <50%, 19	Yes	2 (2.67) 3 (1.13) 4(5.97) U (10.98)
Carver	**#1444**	BSA 7, <50%, 19	Yes	1 (4.76) 3 (4.62)
Carver	**#1444**	BSA 7, <50%, 19	No	U (4.02)
Total Non-Corps Approved Credits Currently Available:				**23.390**
Total Corps Approved Credits Currently Available:				**18.83**

5.6.3 Site Protection

All potential on-site mitigation areas within the proposed BLRT Extension project area would be protected by deed restrictions. All potential credits purchased from wetland banks would already be protected by perpetual conservation easements.

5.6.4 Baseline Information

The following summarizes site characteristics for potential on-site wetland mitigation opportunities within the proposed BLRT Extension project area:

- **Theodore Wirth Regional Park.** This area is adjacent to Bassett Creek and is partially underlain by fill material composed of construction rubble. Existing plant communities are non-native upland forb-land with some disturbed floodplain forest in the southernmost extent. Fill would be removed and this area would be re-contoured to intercept and retain the flow of Bassett Creek to provide floodplain volume mitigation and wetland mitigation. The lat/ long of this site is: 44.985419/ -93.318095

- **Bassett Creek relocation.** This ~450 foot reach of Bassett Creek would be moved approximately 20 feet to the west in the vicinity of the Plymouth Avenue Bridge. The lat/ long of this site is: 44.991548/ -93.319394

- **Expansion of southeast corner of Wetland 39.** The elevation of the wetland boundary in the southeasternmost extent of Wetland 39 would be moved to the southeast. Soil would be removed and this area would be re-contoured to provide floodplain volume mitigation and wetland mitigation. The lat/ long of this site is: 45.000825/ -93.323692

- **Expansion of southern and western edge of Wetland 28.** The elevation of the wetland boundary in the southern and western extent of Wetland 28 would be moved to the south and west. Soil would be removed and this area would be re-contoured

to provide floodplain volume mitigation and wetland mitigation. The lat/ long of this site is: 45.066318/ -93.367018

- **Former Joyners Golf Course.** This area, once a golf course and prior to that a natural meander of Shingle Creek, was intended to become a wetland mitigation bank in the early 2000s. After most agency permits and approvals had been obtained, the owners, as a result of the economic downturn in the late 2000s, abandoned the project as a result of bankruptcy. Some earthmoving occurred prior to abandonment of the site with the intent of re-meandering Shingle Creek through it – though the site was never actually re-connected to the Creek. No planting of wetland communities or upland buffer occurred. The lat/ long of this site is: 45.100948/ -93.377625

5.6.5 Determination of Credits

Credits, per WCA, would be determined by 8420.0105. Credits, per the USACE, would be determined based on USACE mitigation guidelines.

Potential credits deriving from on-site mitigation opportunities are currently based on assumptions that would require agency concurrence as the permitting process matures. However, the following provides an estimate of the amount of mitigation credit that each on-site mitigation opportunity might yield. The Council estimates that, cumulatively, on-site mitigation opportunities would yield approximately 4-6 acres of wetland credit.

- **Theodore Wirth Regional Park.** Based on the close proximity of Bassett Creek and the presence on construction rubble fill, it is assumed that this site was a wetland in the past. Therefore, wetland credits would be considered restoration for which would yield 100% credit. Upland buffers, planted in native upland prairie would yield 25% credit. The proposed complex of Type 2, 3 and 6 wetlands and upland buffer may yield approximately 1.5 acres of wetland credit.

- **Bassett Creek relocation.** This ~450 foot reach of Bassett Creek would be moved approximately 20 feet to the west in the vicinity of the Plymouth Avenue Bridge. The lat/ long of this site is: 44.991548/ -93.319394. This is the relocation of a linear reach of stream and would involve appropriate BMPs and stream restoration practices.

- **Expansion of southeast corner of Wetland 39.** This expansion of a portion of Wetland 39 currently lies above the delineated boundary of the wetland. Therefore, the excavation would be considered wetland creation, yielding 75% of the footprint of the excavation. The footprint is 0.0916 acres and the credit yield would be a percentage of that, likely 75% if it would be creditable as wetland creation.

- **Expansion of southern and western edge of Wetland 28.** This expansion of a portion of Wetland 28 currently lies above the delineated boundary of the wetland. Therefore, the excavation would be considered wetland creation, yielding 75% of the footprint of the excavation. The footprint of the expansion is 0.5871 acres and the credit yield would be a percentage of that depending on whether it would be wetland creation of upland buffer.

- **Former Joyners Golf Course.** This area was, in the early 2000s, intended to be converted to a wetland mitigation bank and was slated to yield approximately 10-12 acres of credit. Depending on whether the golf course (upland) is considered the baseline or the pre-golf course wet condition is considered the baseline the proposed

wetland work could be considered creation or restoration. It is assumed that the site could yield between 5 and 10 acres of credit.

-

Potential credits deriving from wetland bank purchases are straightforward. There are currently ample credits available in suitable private banks to make up for shortfalls in on-site mitigation opportunities. It is assumed that the mitigation component derived from private wetland bank purchases would be greater than the component deriving from on-site mitigation opportunities.

5.6.6 Mitigation Work Plan

Earthmoving within proposed on-site mitigation areas is scheduled to begin in 2017 or 2018. Side slopes (upland buffers) would be contoured to be as flat as is practicable. Areas where earthmoving would occur would be rapidly re-vegetated. BMPs would be implemented to minimize erosion. Suitable seed mixes, plugs and whips (where appropriate) for wetland and upland prairie communities would be planted.

5.6.7 Maintenance Plan

On-site mitigation areas would be monitored for approximately 5 years based on intended hydrology and plant communities. Invasive species infestations would be mapped and eradicated with herbicide using broadcast or spot spraying methods as needed. Deficiencies in wetland hydrology would be amended as needed. If conditions within the on-site mitigation area are progressing favorably, the monitoring period, with agency concurrence, may be shortened. Final credits derived from the mitigation area would be based on a final wetland delineation that would be submitted to the TEP and the USACE for approval.

5.6.8 Performance Standards

Hydrology monitoring would be based on the suite of hydrology indicators typically used for wetland delineations, including assessment of primary and secondary indicators. If an on-site mitigation area meets the criteria for wetland hydrology per the USACE Wetland Delineation Manual and appropriate Regional Supplements, then it would also meet the performance standards set forth in the monitoring plan.

If an area (wetland credit or native upland buffer credit) has less than 20% of the area occupied by invasive species, it would be considered to meet vegetation performance standards set forth in the monitoring plan.

It is assumed that private mitigation credits would have already achieved performance standards before the credits are released for sale.

5.6.9 Monitoring Requirements

Following construction, permanent sampling/observation points would be established in transects running perpendicular to as-built contours for each on-site wetland mitigation area. Percent cover of each species would be recorded in a radius from the sampling point consistent with the USACE Wetland Delineation Manual and appropriate Regional Supplements. Hydrology indicators would be recorded at each sampling point. A total plant species list would be recorded in a random meander throughout each on-site mitigation area. An annual monitoring report would be submitted to the TEP and the USACE. Corrective actions, where needed, would be undertaken.

It is assumed that relevant private mitigation banks to be used for the proposed BLRT Extension project have already completed a monitoring process before credits are released for sale.

5.6.10 Long-Term Management Plan

After the monitoring period has ended, on-site mitigation areas would be assessed occasionally for potential recurring invasive species issues. Corrective actions would be implemented.

5.6.11 Adaptive Management Plan

If hydrology is deficient, the Council would potentially propose corrective action such as earthwork or adjustment of inverts, or the Council would re-calculate credit yield and make up the difference through purchase of additional private wetland mitigation credits.

Infestations of invasive species throughout the monitoring period and post-monitoring period would be assessed and a strategy to control the issue would be developed. If the issue were of such a magnitude that it would jeopardize credit yield, and it becomes evident that the problem cannot be brought under reasonable control, then credit yield would be re-calculated and additional credits would be purchased from a suitable private wetland mitigation bank.

5.6.12 Financial Assurances

Proposed on-site mitigation success would be the subject of TEP and USACE concurrence based on monitoring. If portions of the on-site mitigation areas and corrective actions are deemed unsuccessful, then the credit deficit would be made up by purchasing additional private wetland mitigation bank credits.

Table 9
Summary of Wetland Replacement Needs

Wetland Regulatory Authority	Quantity of Wetland Impacts Requiring Mitigation by Regulatory Authority	Proposed Mitigation Ratio	Required Mitigation	Total Credits to be Debited from Banks (Proposed)	Total On-site Mitigation Credits
USACE Jurisdiction	4.1623	2:1	8.3246	~3.3246	~5
WCA Jurisdiction	6.2815	2:1	12.5630	~7.5632	~5
DNR Jurisdiction	All assumed to be waived to WCA	--	--	--	--

5.6.13 Agency Requirements

5.6.13.1 U.S. Army Corps of Engineers

The USACE rules require a base replacement ratio of 2.5:1 in for this “<50%” area of Minnesota for direct wetland impacts, with incentives to reduce that ratio to 2:1. Incentives are offered if the wetland mitigation is provided “in kind,” with wetland replacement being the same type as that impacted; “in place,” purchase of credits in the same wetland bank service

area (BSA) or creation of wetland onsite; and, "in advance," or prior to the impacts from the proposed action. In some circumstances, impacts to USACE jurisdictional basins or ditches may be considered "self-mitigating" if it can be demonstrated that the basin or ditch would function similarly comparing pre and post-construction conditions.

5.6.13.2 Wetland Conservation Act (Various WCA LGUs)

The WCA would require a 2 :1 mitigation ratio, given that the impacts would occur in the "<50%" area of Minnesota, BSA 7, Major Watershed 20 and the 7-county Metro area of the Twin Cities and assuming that mitigation would occur BSA 7 and the "<50%" zone. It is assumed that some mitigation would be on-site to the extent practicable and the remainder of required mitigation would derive from private banks in Hennepin County and suitable portions of Carver County.

5.6.13.3 Minnesota Department of Natural Resources

A Public Waters Work Permit, issued by the DNR, would be required for any work that is proposed within Public Watercourses, Public Waters and Public Waters Wetlands. A Public Waters Work Permit application would be submitted electronically through the MPARS. The DNR may choose to waive jurisdiction to WCA LGUs as part of the permit review process.

5.7 Permitting

Permits for impacting wetlands would be required by the USACE and approvals for the replacement plan would be required by the various WCA LGUs. Work within Public Watercourses, Public Waters, or Public Waters Wetlands would require a Public Waters Work Permit issued by the DNR.

5.7.1 U.S. Army Corps of Engineers

The proposed BLRT Extension project is eligible for an Individual Permit. A copy of the Joint Application Form for Activities Affecting Water Resources in Minnesota is provided at the beginning of this document. A copy of this application has also been submitted to the MPCA for their review and approval, and subsequent issuance of Clean Water Act Section 401 Certification.

5.7.2 Wetland Conservation Act – Various WCA LGUs

The WCA LGUs listed below are responsible for administering the WCA in the proposed BLRT Extension project area. Compensatory mitigation for wetland impacts is proposed through withdrawal of credits from a suitable wetland bank and on-site wetland mitigation. A copy of the Joint Application Form for Activities Affecting Water Resources in Minnesota is provided at the beginning of this document. **Tables 3 and 4** show the relevant WCA LGU for each delineated basin in the proposed BLRT Extension project area. Relevant WCA LGUs within the proposed BLRT Extension project area include:

- Shingle Creek Watershed Management Commission
- City of Crystal
- Bassett Creek Watershed Management Commission
- City of Golden Valley
- City of Minneapolis

5.7.3 Minnesota Department of Natural Resources

The DNR is responsible for all public waters and public waters wetlands in the proposed BLRT Extension project area. A DNR Public Waters Work Permit Application would be submitted via the MPARS on-line tool. The DNR may choose to waive jurisdiction to WCA during the permit review process. Public Waters are depicted on **Figures 2 and 3**. A summary of public waters in the proposed BLRT Extension project area is as follows:

- **Unnumbered Public Watercourse**. Culverted outlet from Wetland #28. See **Figure 2**.
- **Public Water Wetland 644W**. Grimes Pond (Wetland # 33) and North Rice Pond (Wetland #32). See **Figure 2**.
- **Public Water 651P**. Backwater of Bassett Creek associated with Wetland #46, just north of the Plymouth Avenue bridge. See **Figure 2**.
- **Unnumbered Public Water Watercourse**. Bassett Creek near the Plymouth Avenue bridge (associated with Wetland #46) and associated with Wetland #48 near the intersection of the BNSF freight rail and Olson Memorial Highway. See **Figure 2**.

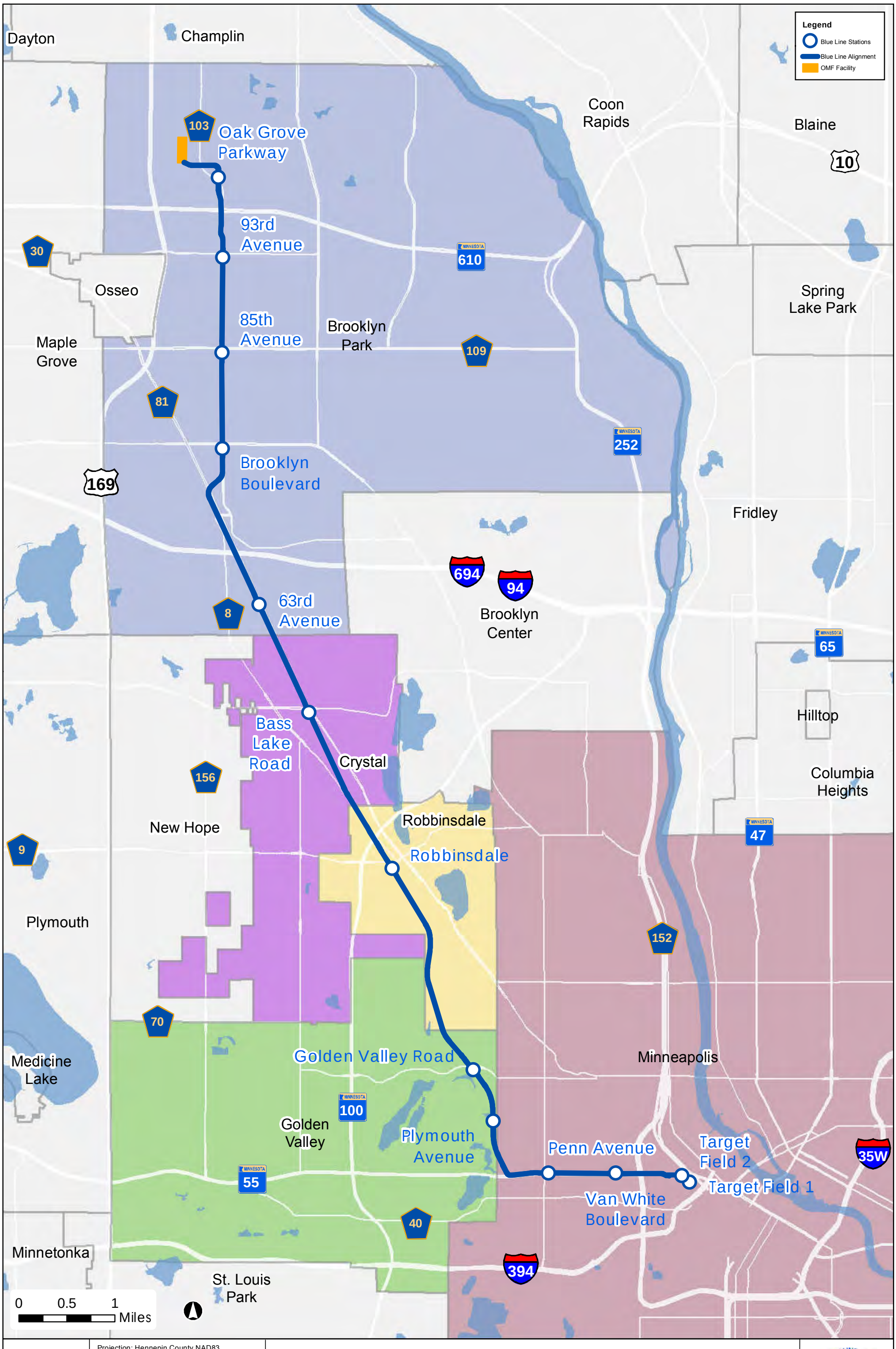
5.8 Supplemental Design Data to be Submitted

Data provided in this permit application is anticipated to be adequate for public noticing of the proposed BLRT Extension project under the Wetland Conservation Act (WCA) and the USACE Section 404 permitting requirements. Comments related to wetland impacts, mitigation, and permitting issues received after the publication of the proposed BLRT Extension project Final EIS and before the Record of Decision would be provided to the USACE, MPCA (for CWA 401 Water Quality Certification), DNR, and the appropriate WCA LGU in a supplemental submittal. **Table 10** summarizes supplemental data that would be forthcoming to inform the permit decision.

Table 10
Summary of Supplemental Data to be Provided by The Council

Data	Anticipated Date
Hydraulics Reports (various aquatic resources)	Q1 2017
SWPPP	Q2 2017
Additional Final Design Details	Q2 2017
Detailed Grading and Planting Plans for Proposed On-Site Mitigation	Q2 2017
Draft Purchase Agreements for wetland credit purchases	Q3 2017
Fully executed credit withdrawal transaction forms for purchases on wetland mitigation credits.	Q3 2017

List of Figures



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Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA.

Figure 1 - Project Location

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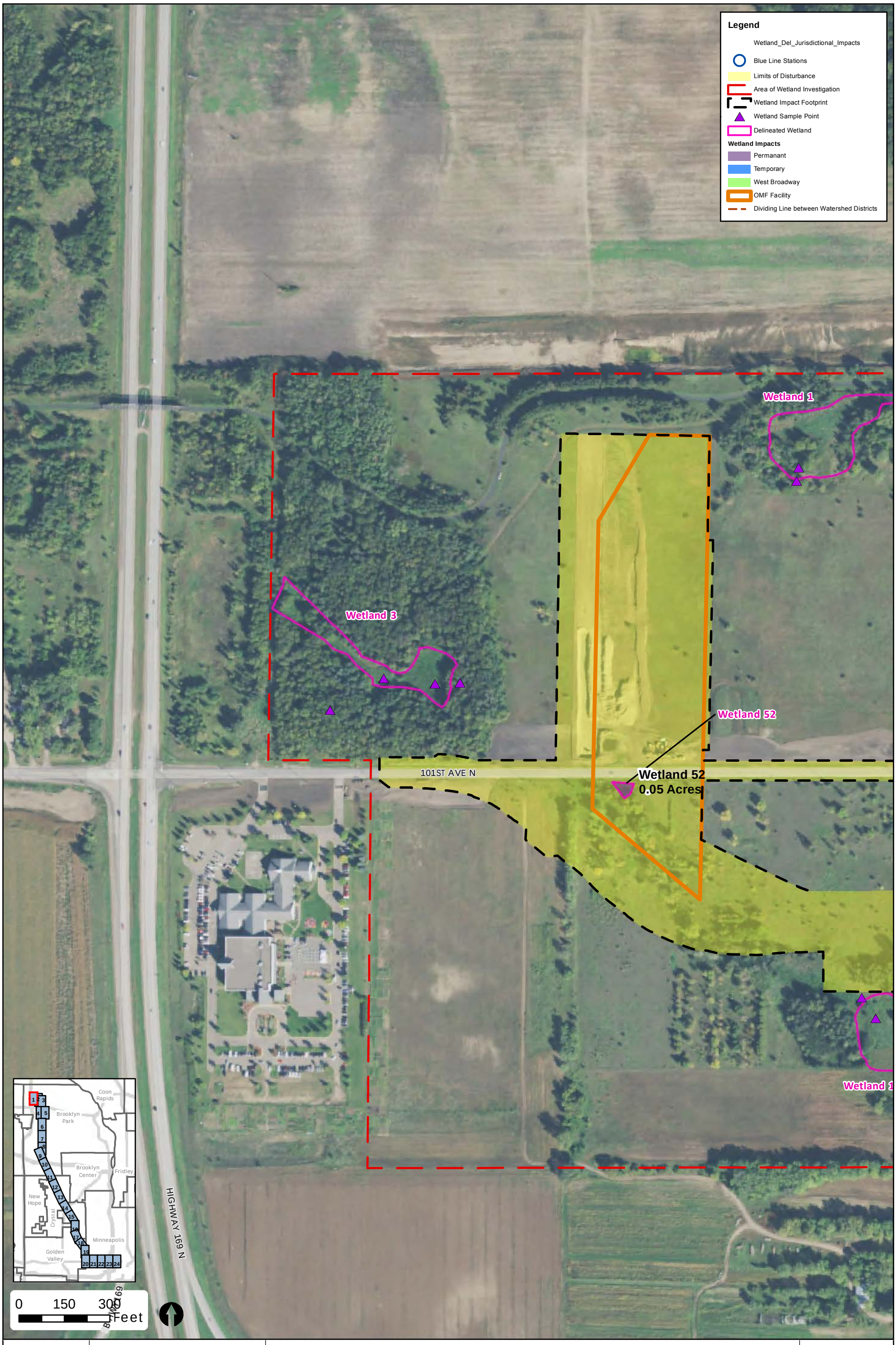

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Figure 2 - Wetlands
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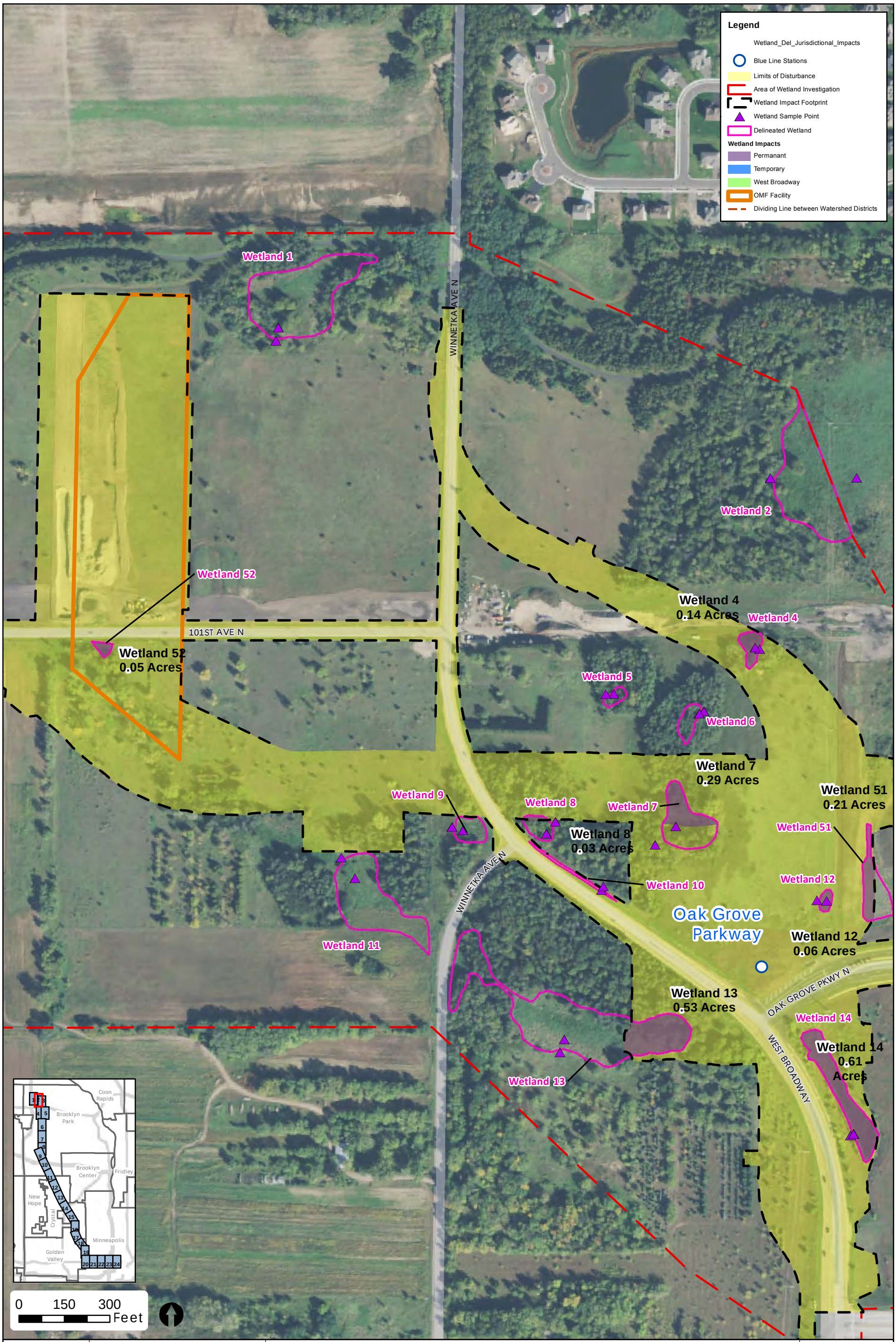

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Figure 2 - Wetlands
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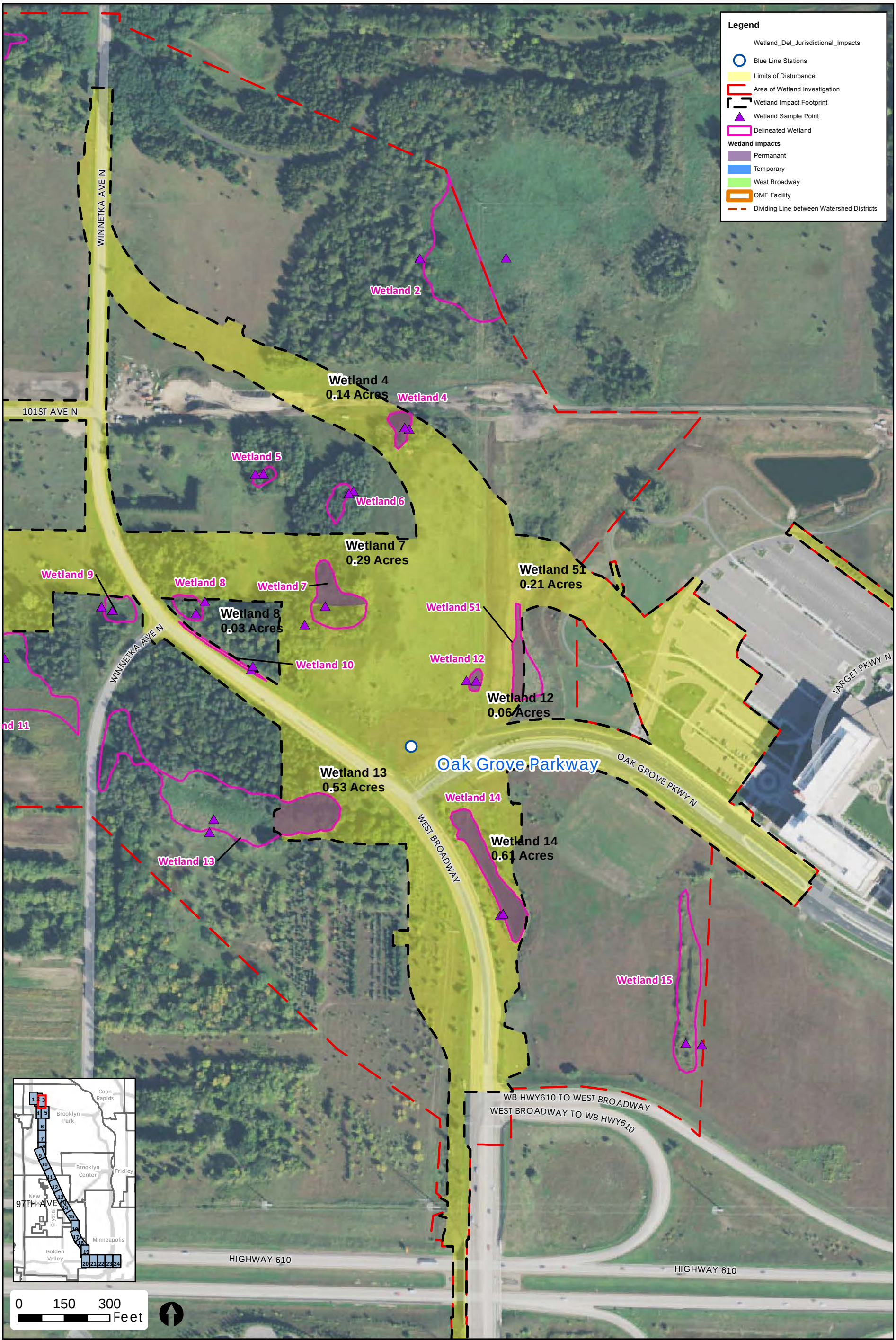

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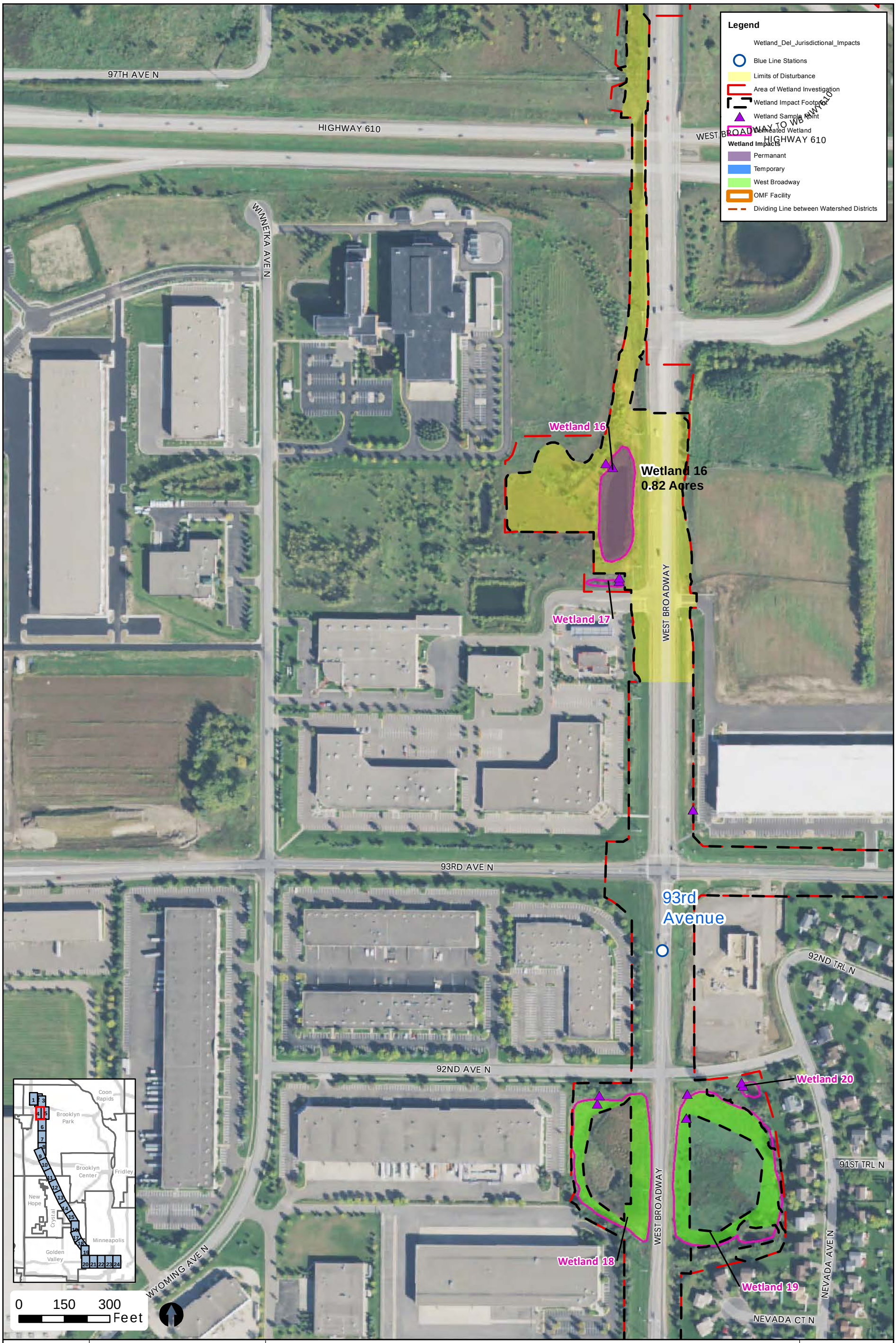

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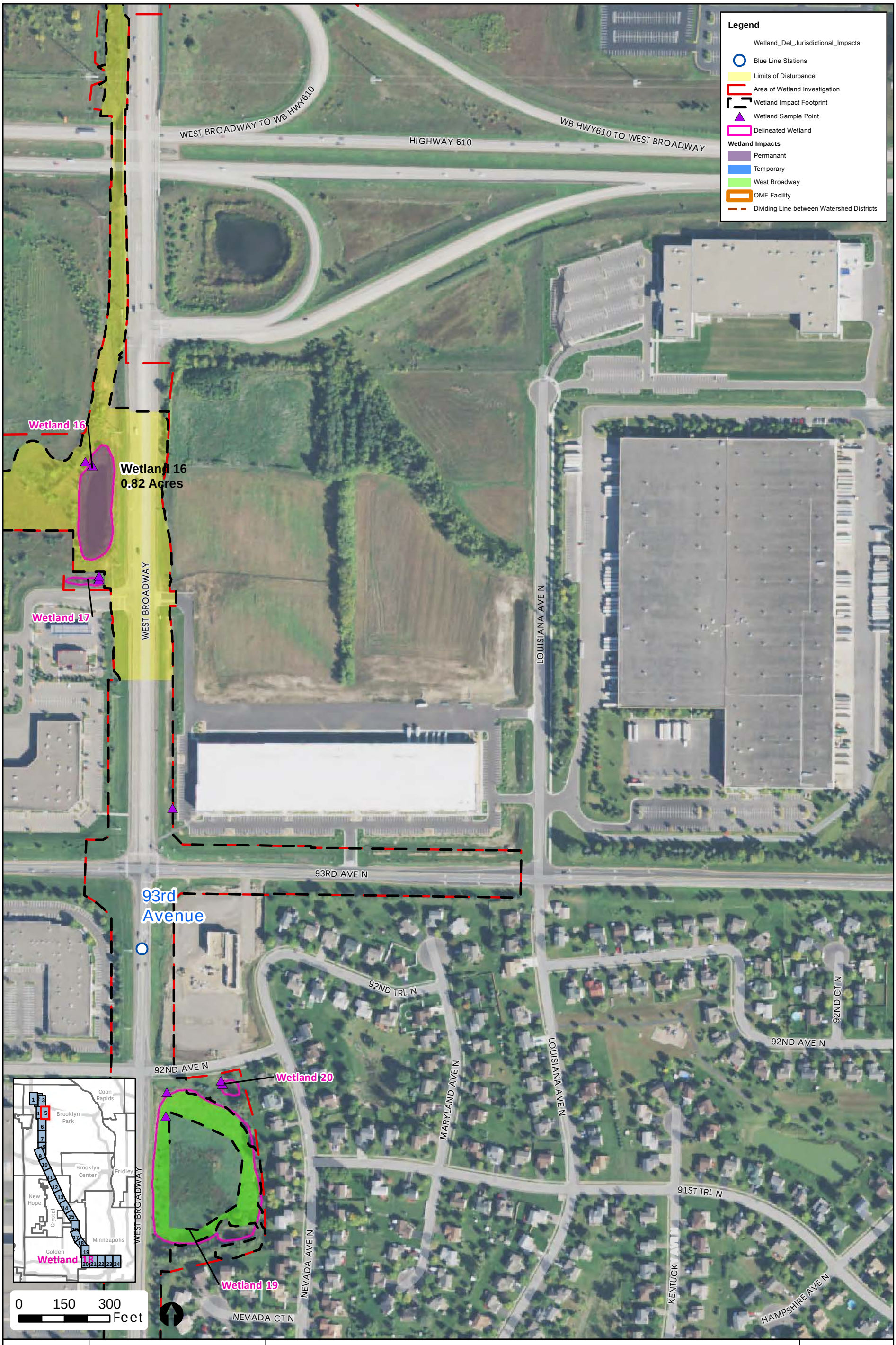

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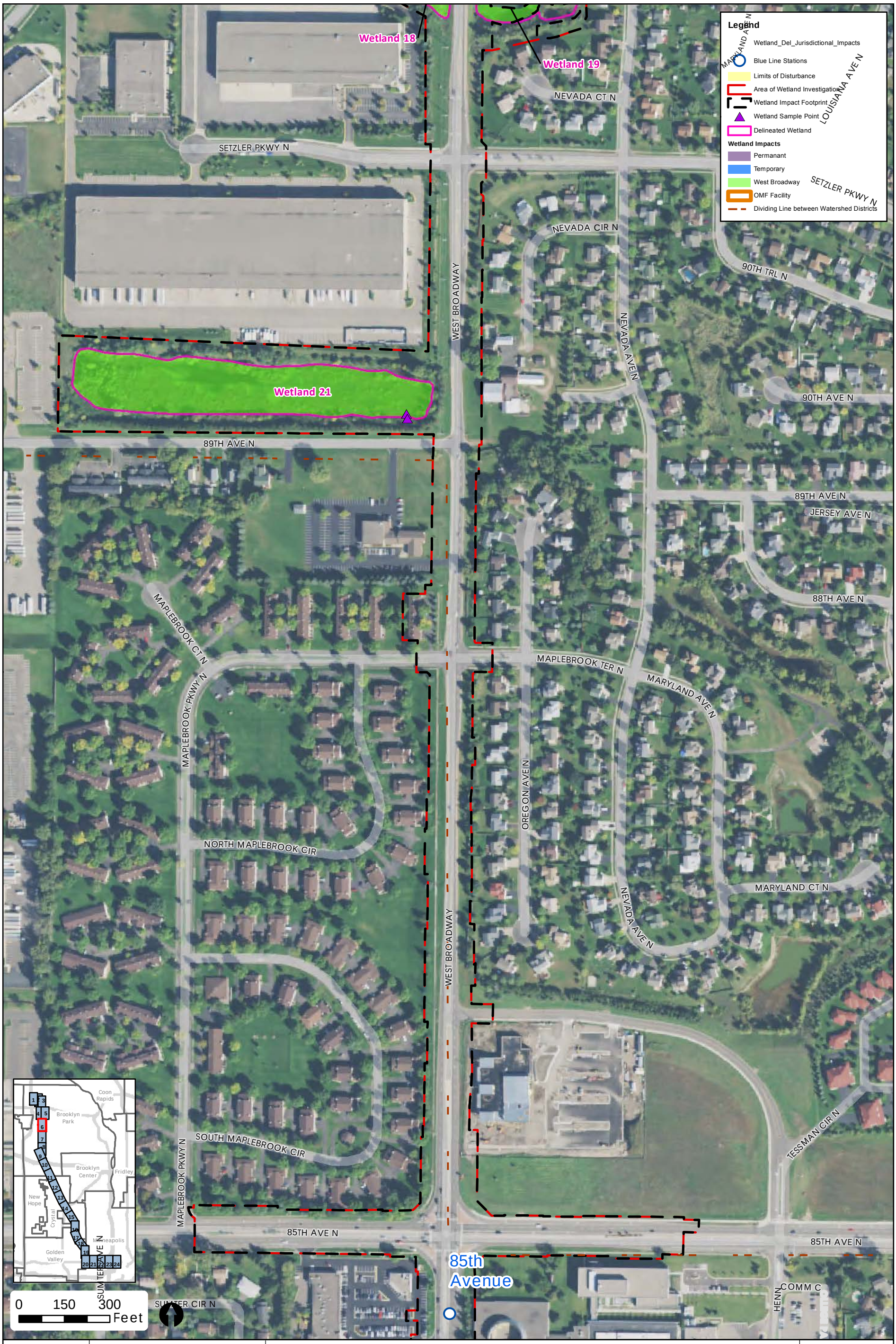

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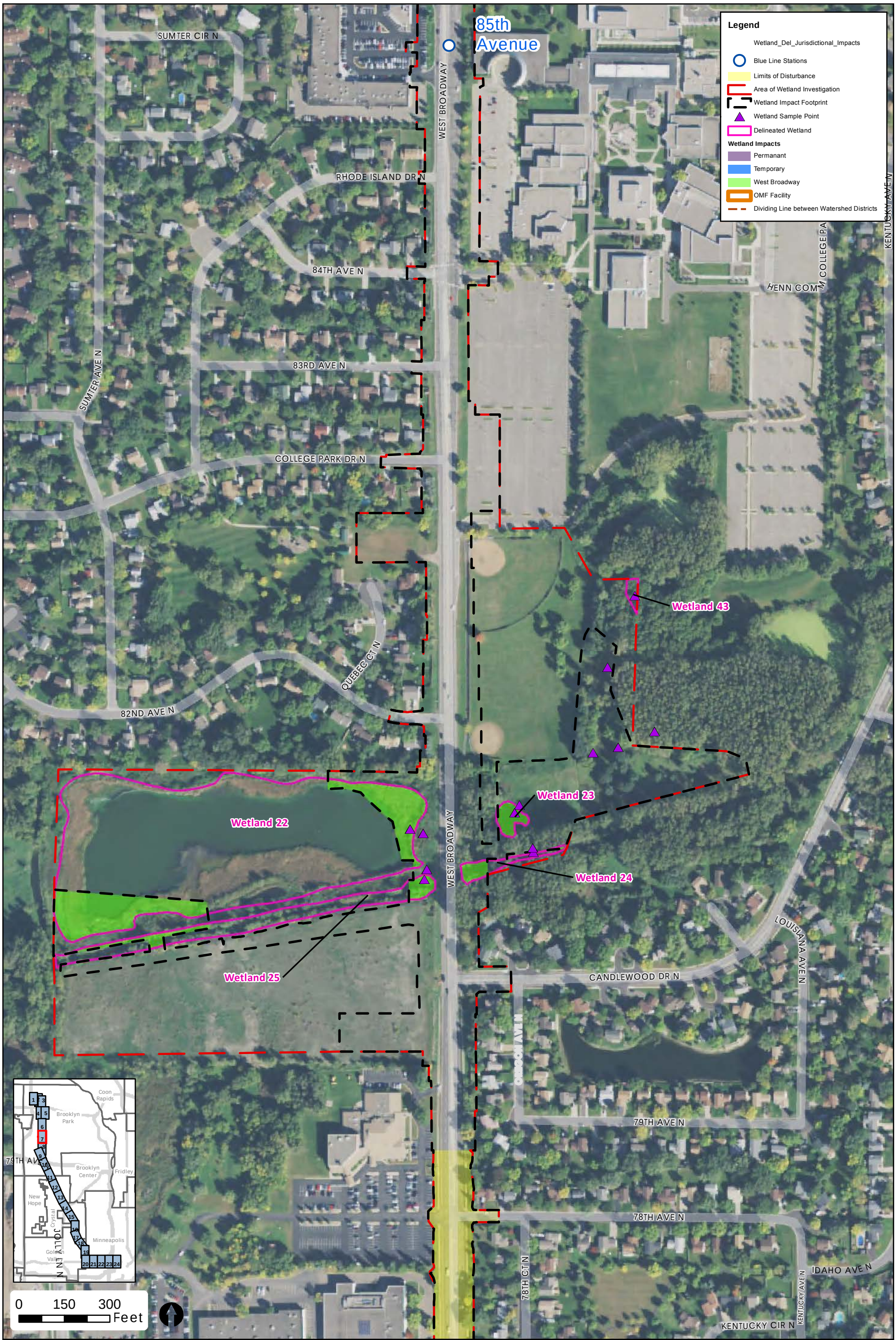

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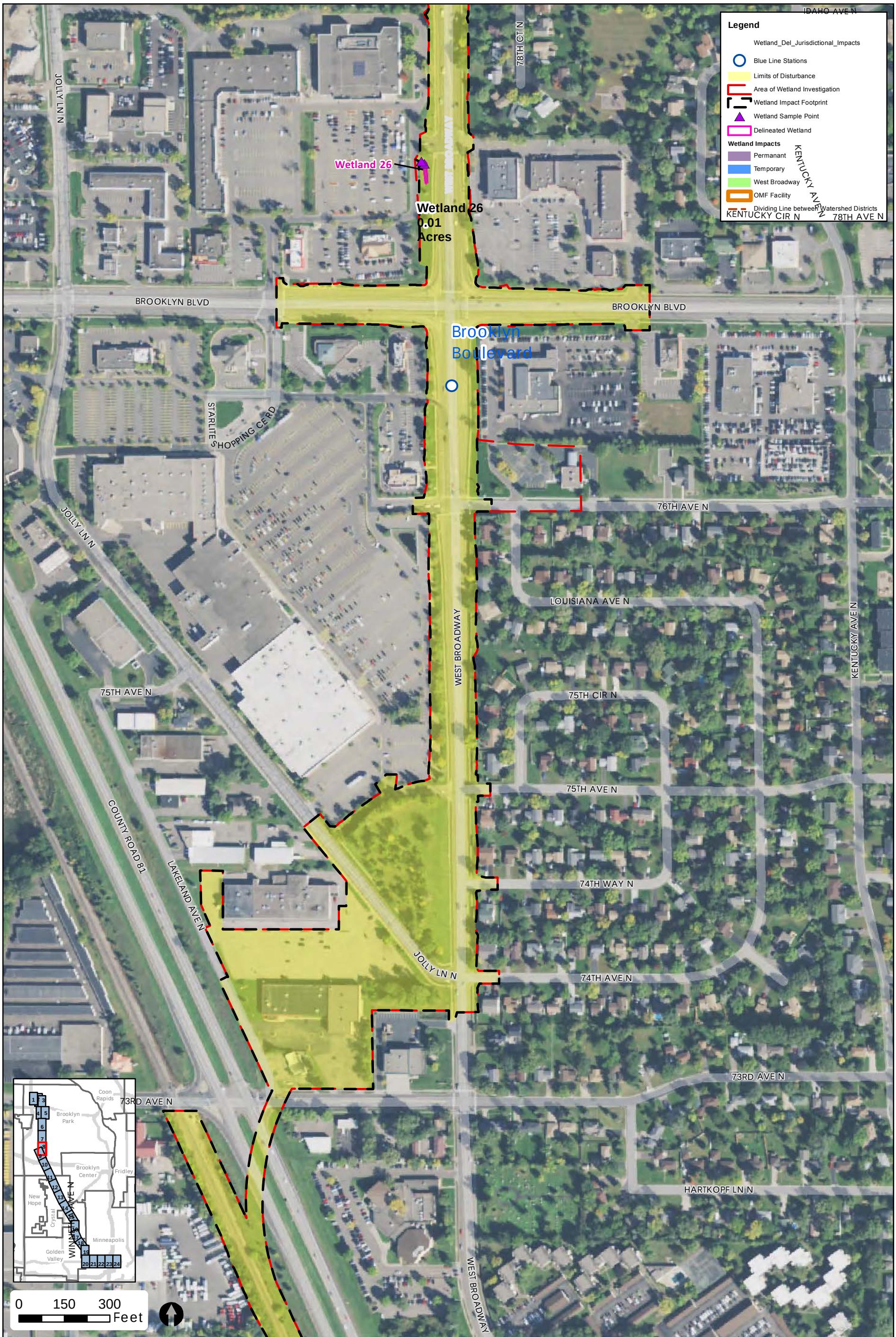

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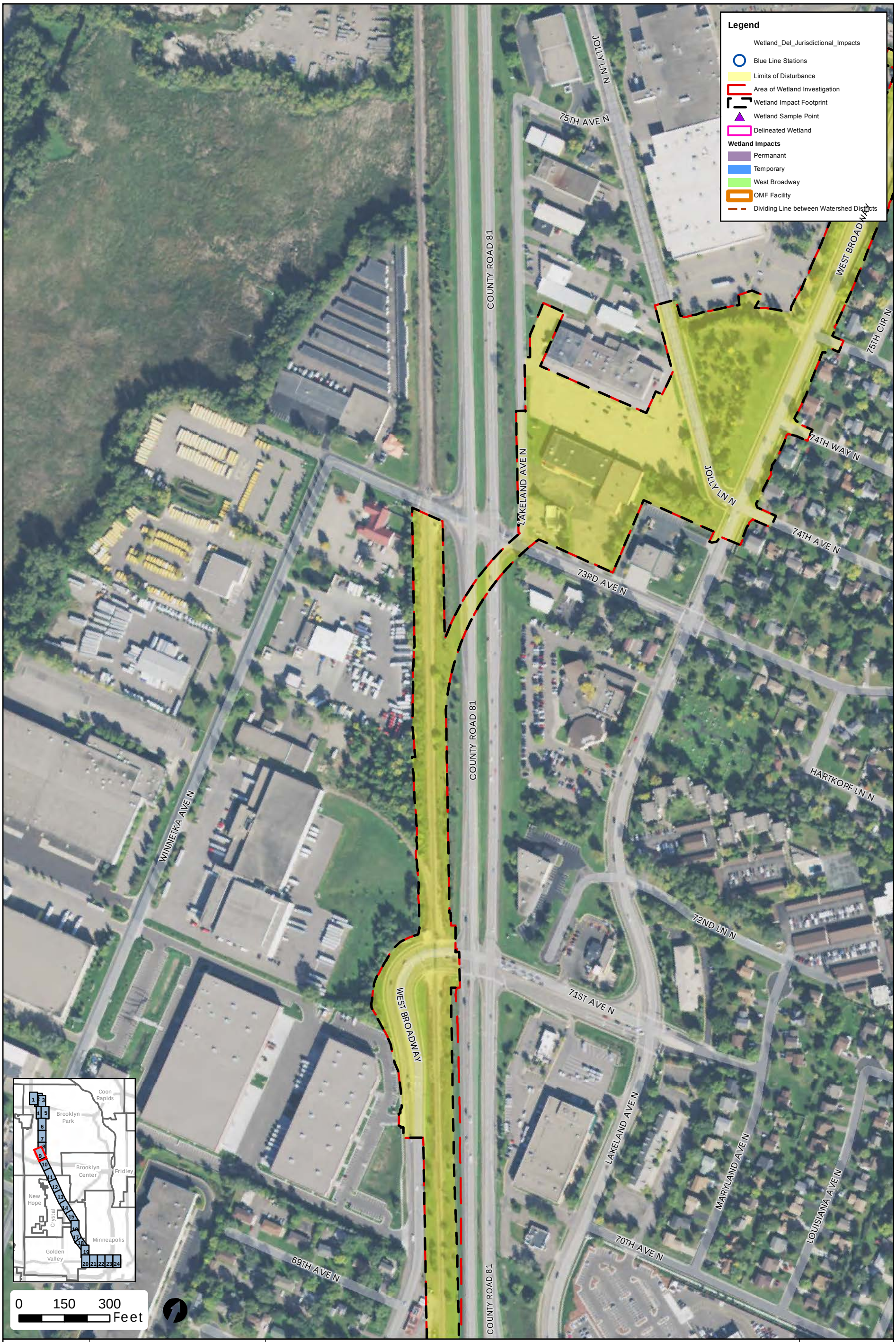

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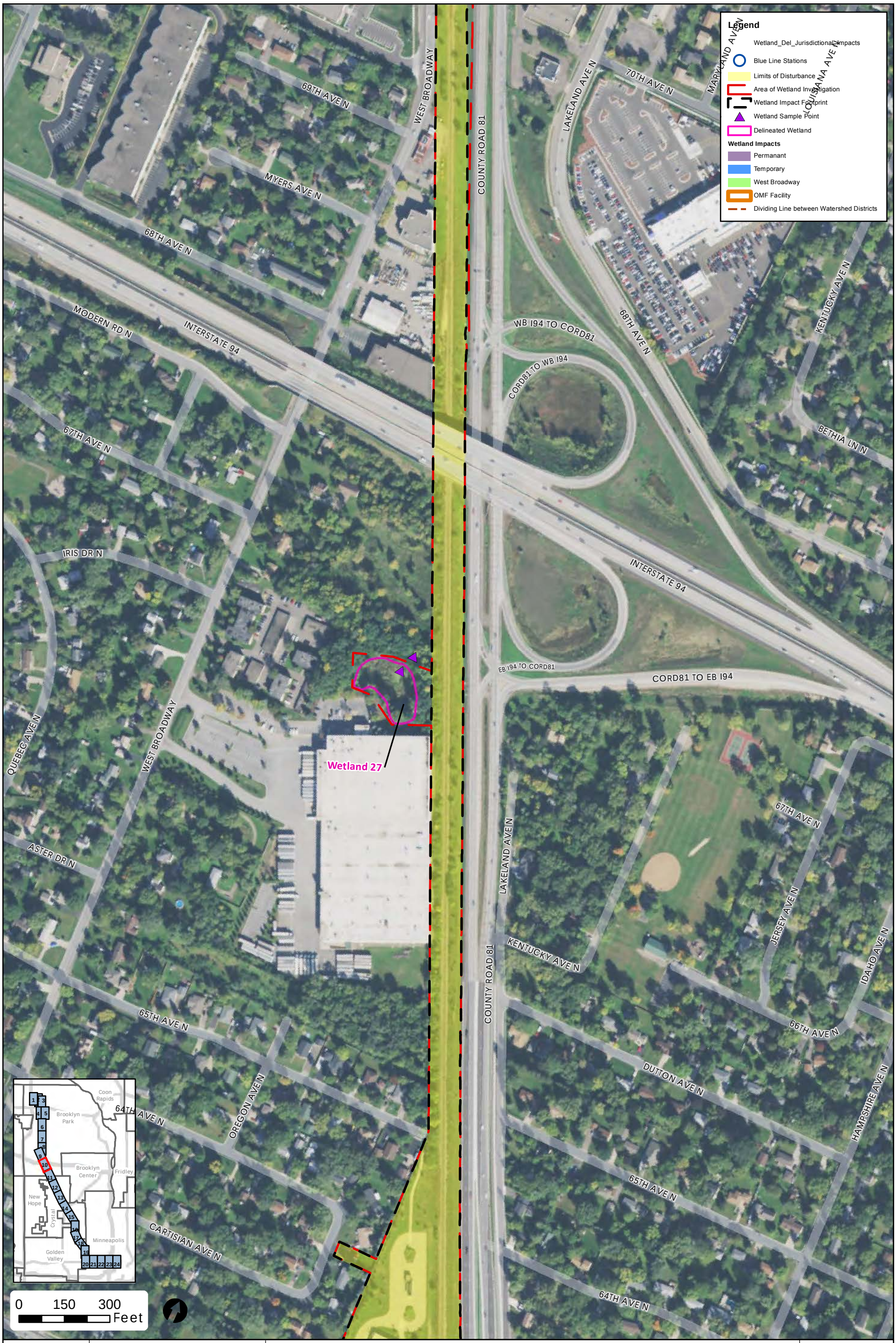

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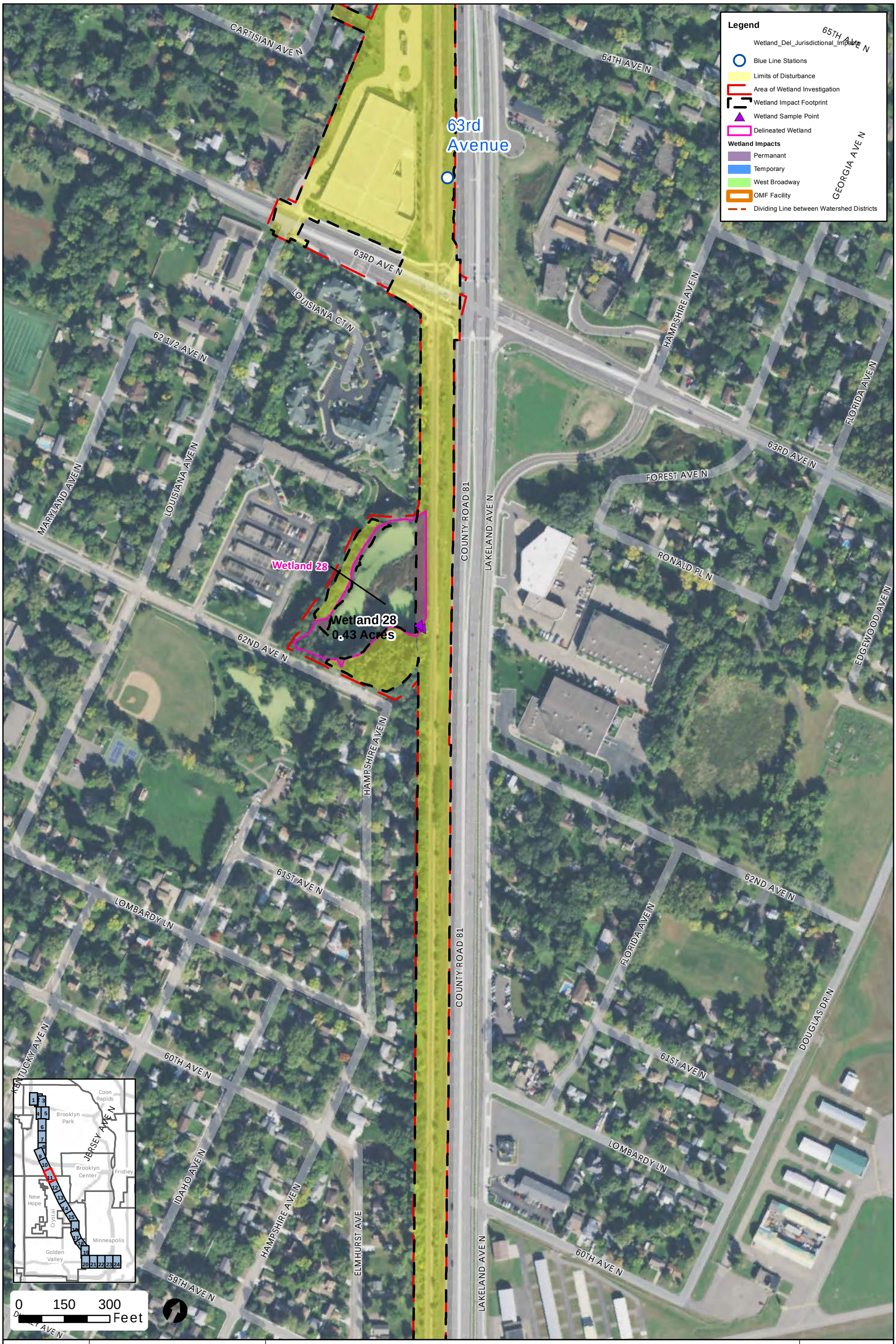

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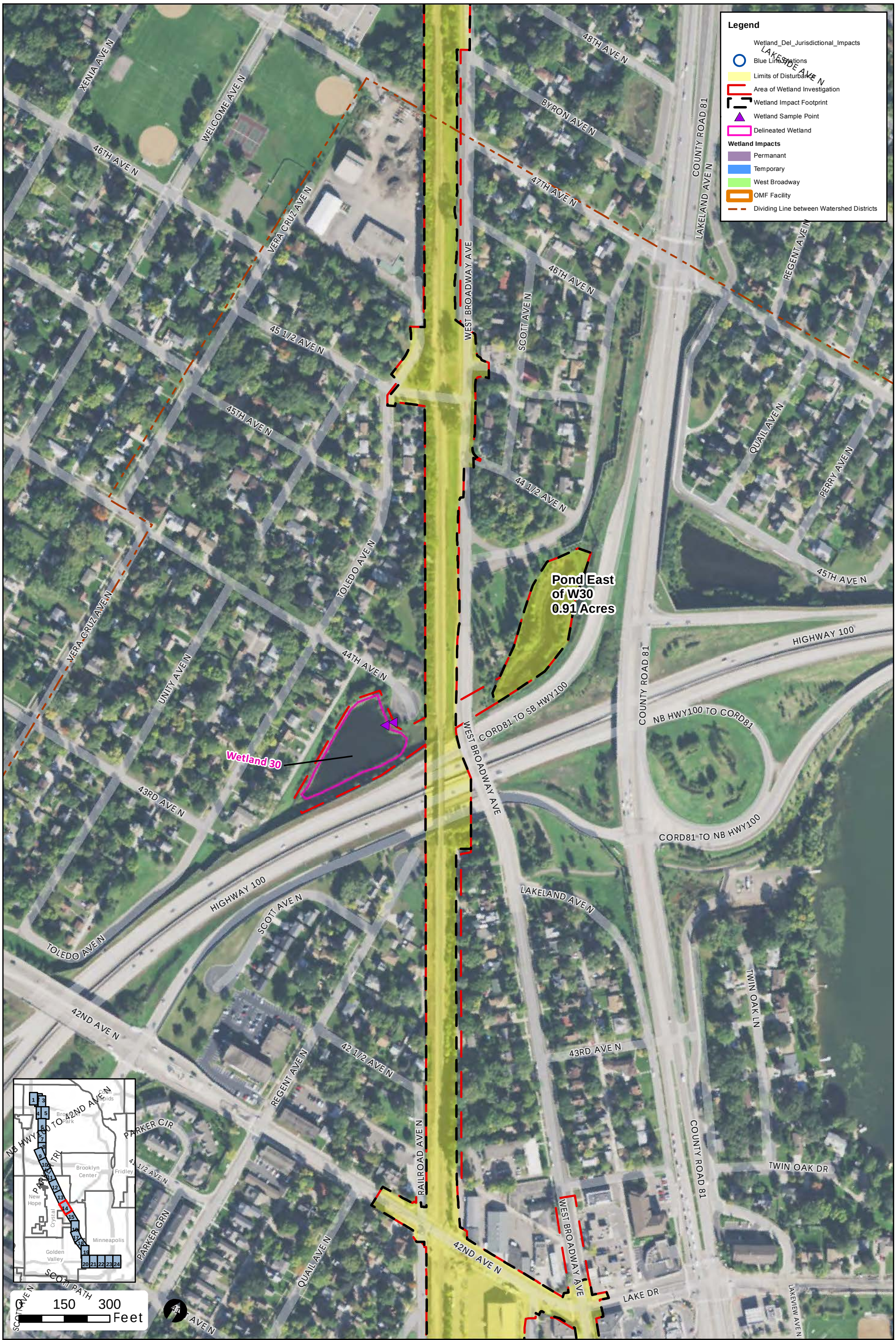

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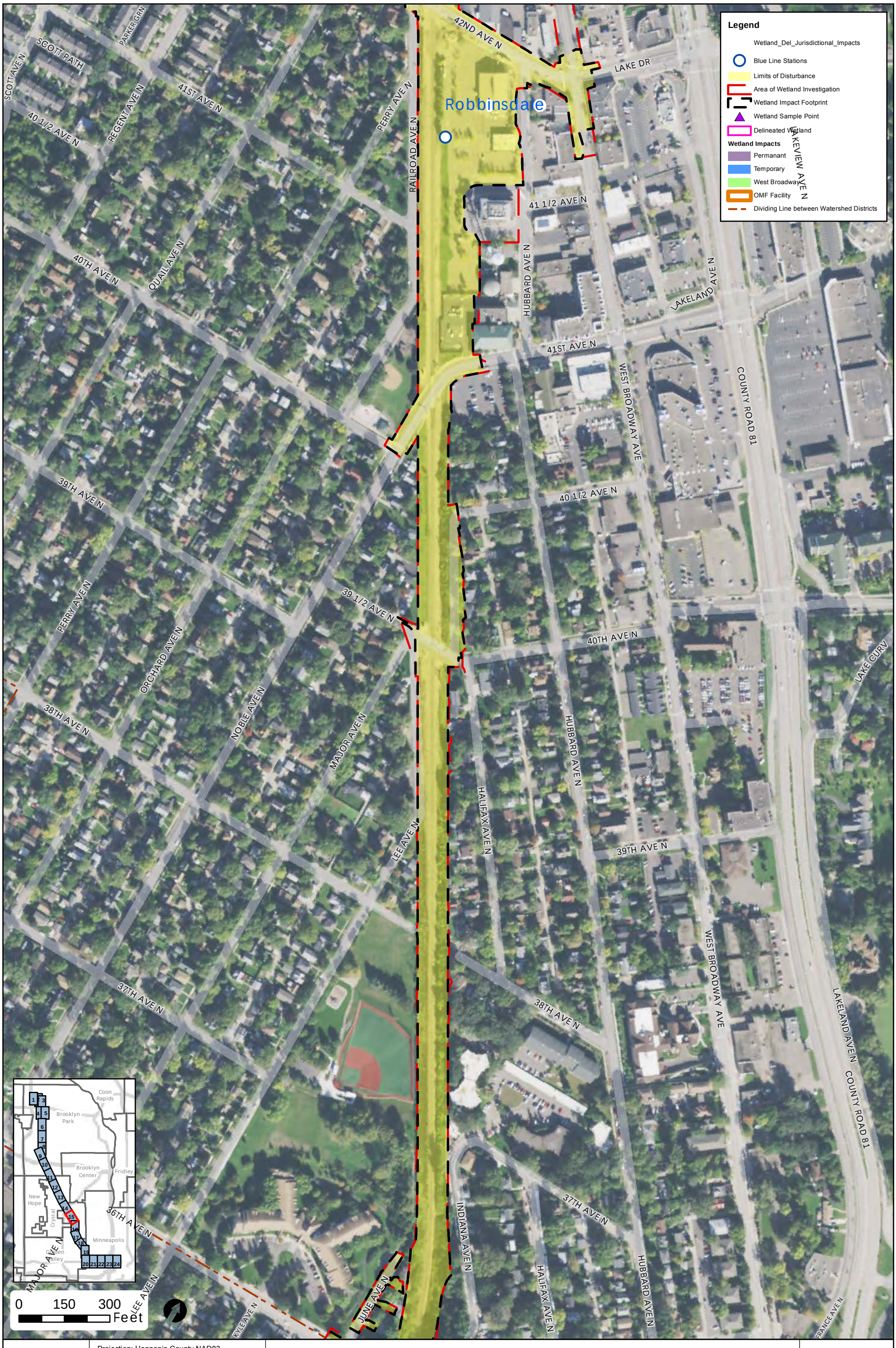

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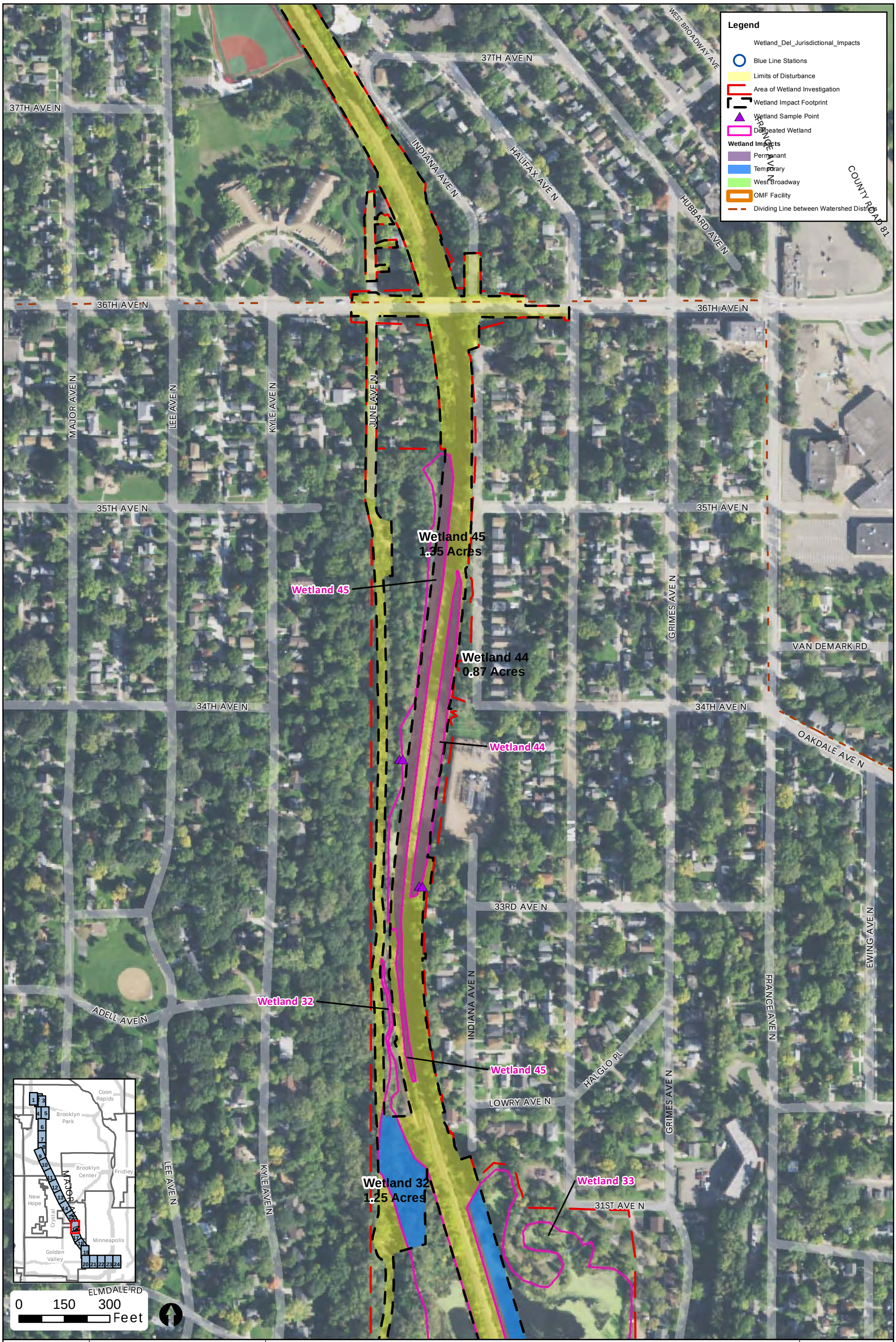

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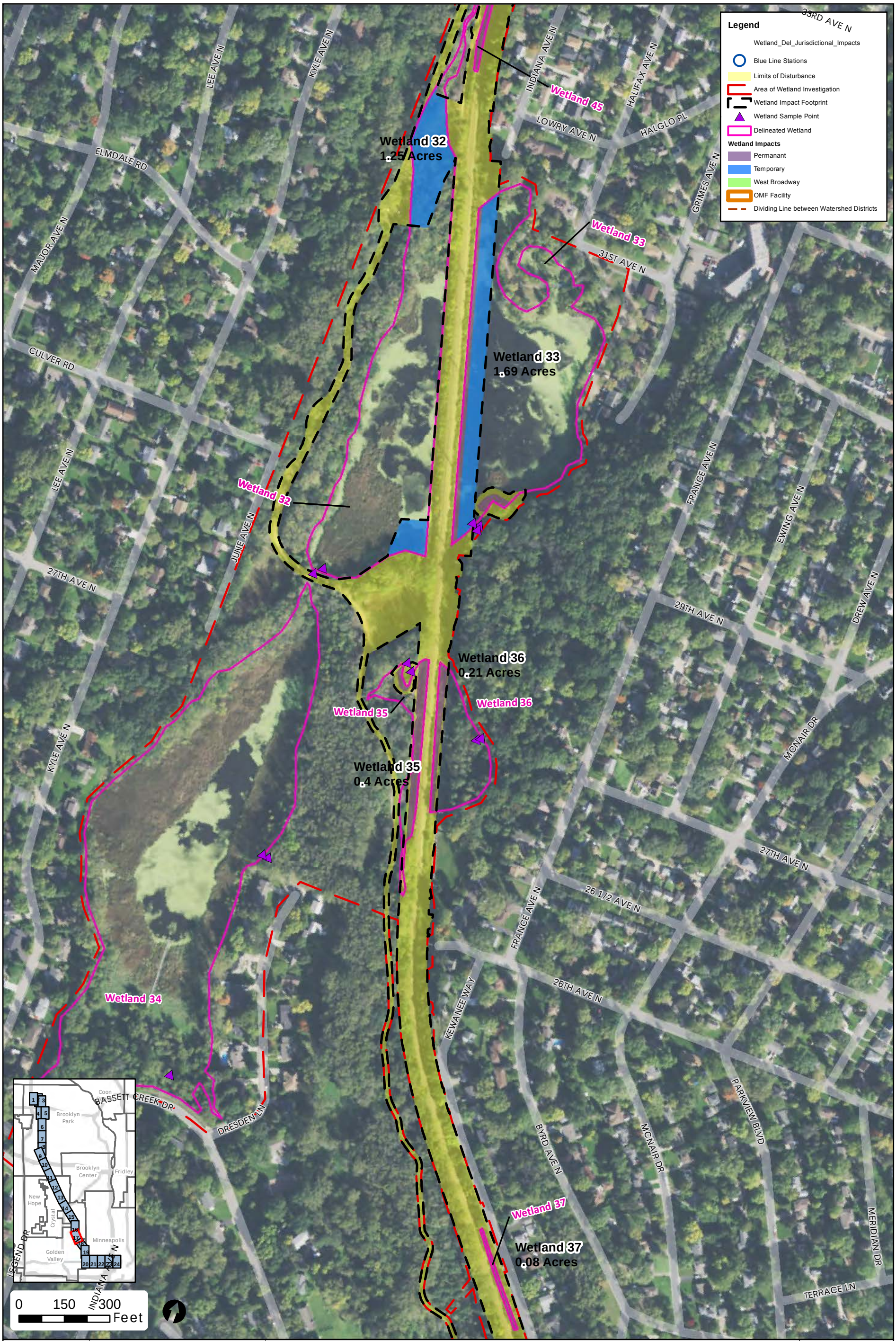

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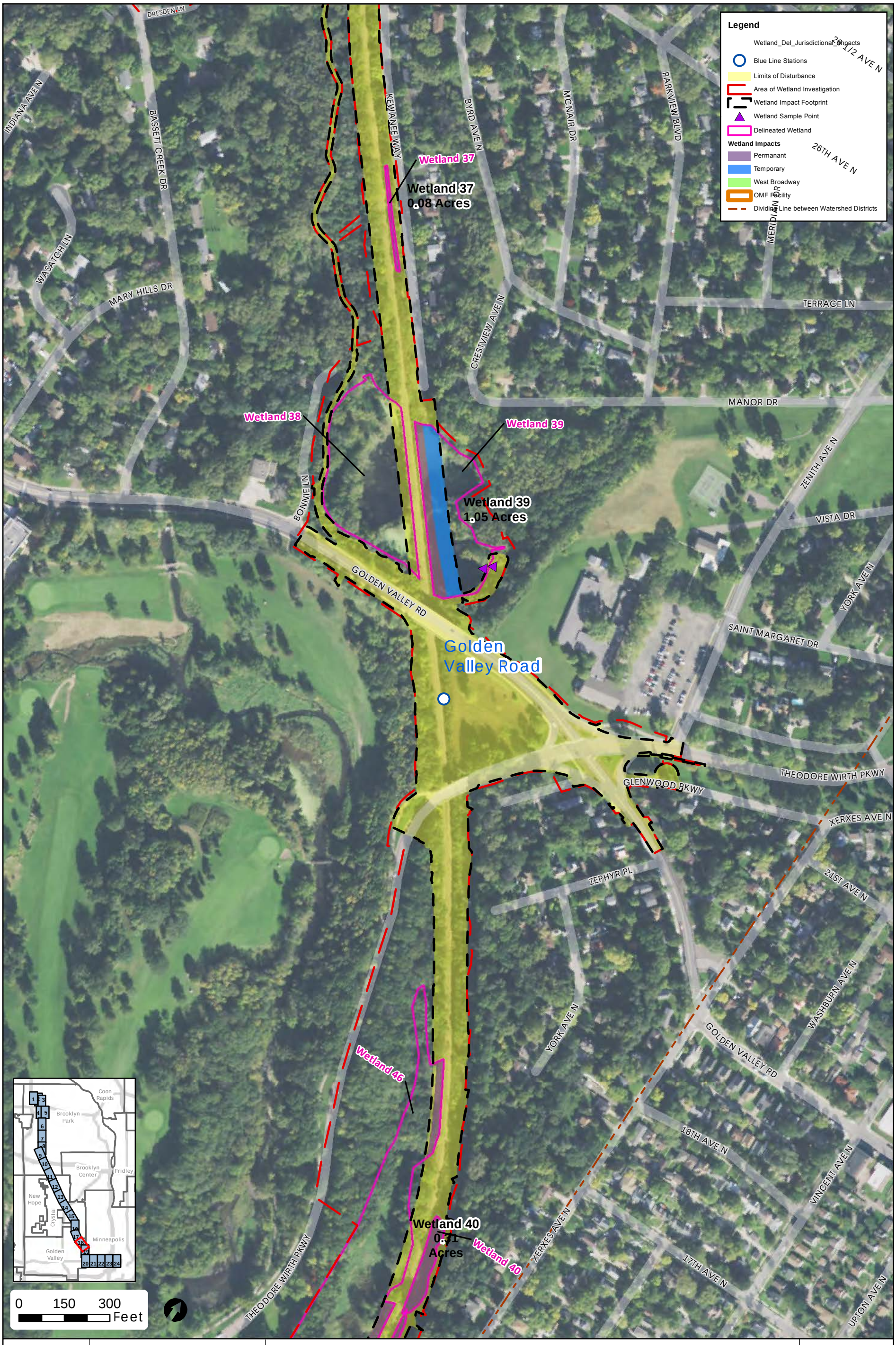

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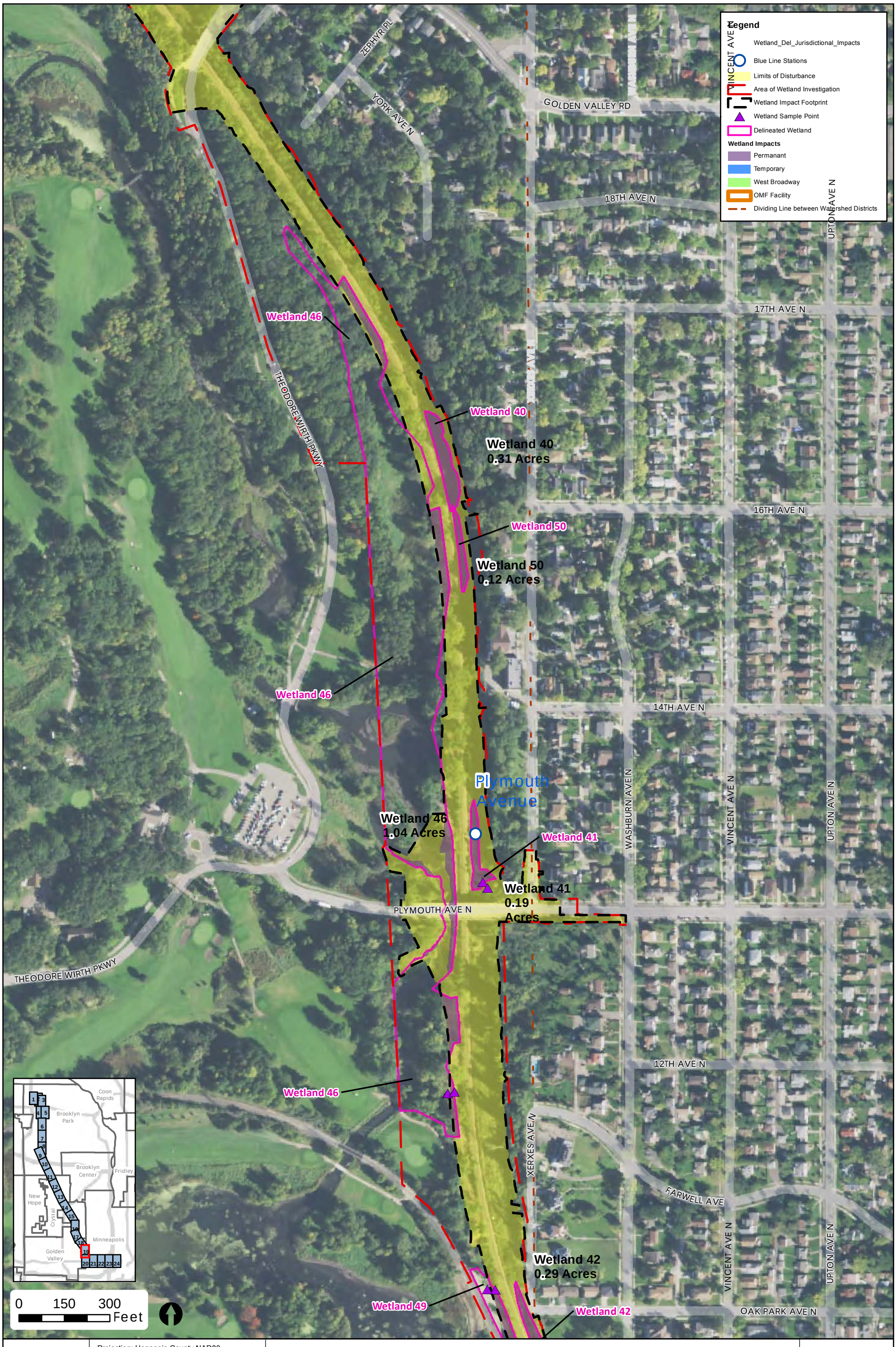

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., and SEH Inc.

Figure 2 - Wetlands
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METRO Blue Line Extension

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Wetland 46
Wetland 49
Wetland 42
0.29 Acres
Wetland 42
Wetland 49
0.1 Acres
Wetland 49
Wetland 48
0.15 Acres
Wetland 48
Wetland 48
XERXES AVE N
OAK PARK AVE N
WASHBURN AVE N
UPTON AVE N
THOMAS AVE N
8TH AVE N
7TH AVE N
HIGHWAY 55
HIGHWAY 55
YORK AVE
GLENWOOD AVE
GLENWOOD AVE
XERXES AVE N
WASHBURN AVE N
VINCENT AVE N
THOMAS AVE N
2ND AVE N
FARWELL AVE
12TH AVE N

Legend

Wetland_Del_Jurisdictional_Impacts

- Blue Line Stations
- Limits of Disturbance
- Area of Wetland Investigation
- Wetland Impact Footprint
- Wetland Sample Point
- Delineated Wetland

Wetland Impacts

- Permanant
- Temporary
- West Broadway
- OMF Facility
- Dividing Line between Watershed Districts

Coon Rapids
Brooklyn Park
Brooklyn Center
Fridley
New Hope
Crystal
Minneapolis
Golden Valley
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

0 150 300 Feet

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., and SEH Inc.

Figure 2 - Wetlands
Page 20

METRO Blue Line Extension

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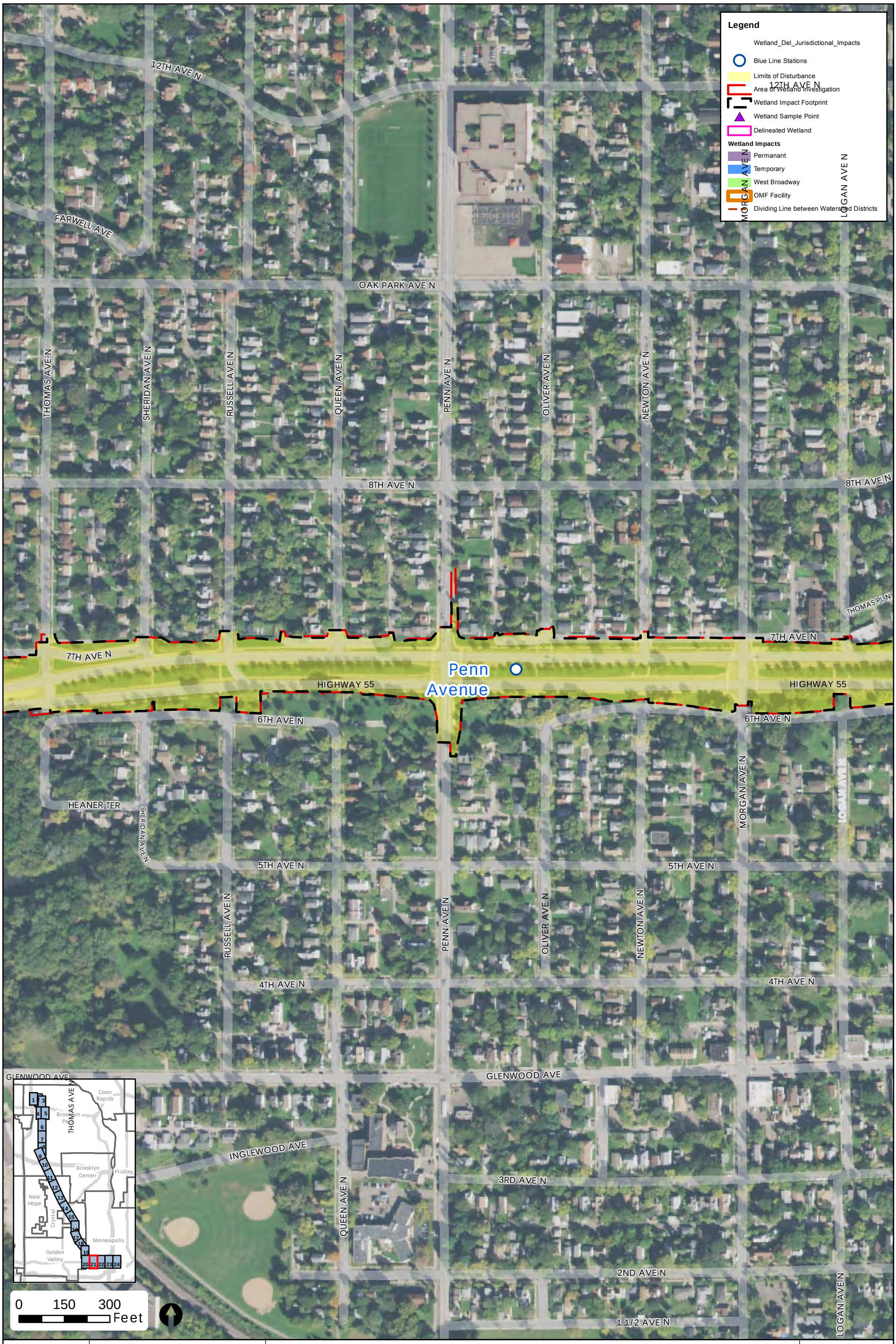

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., and SEH Inc.

Figure 2 - Wetlands
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METRO Blue Line Extension

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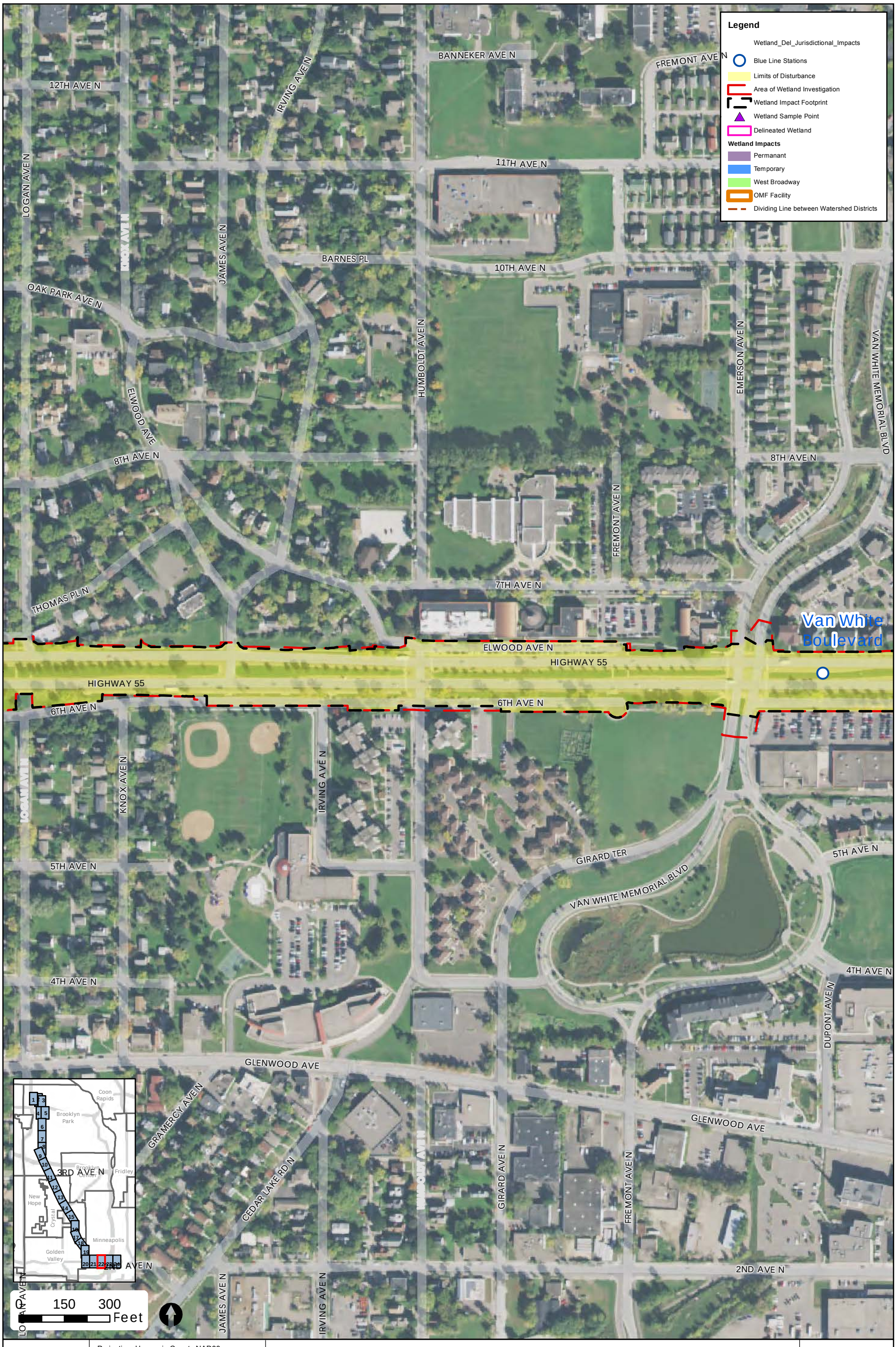

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., and SEH Inc.

Figure 2 - Wetlands
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METRO Blue Line Extension

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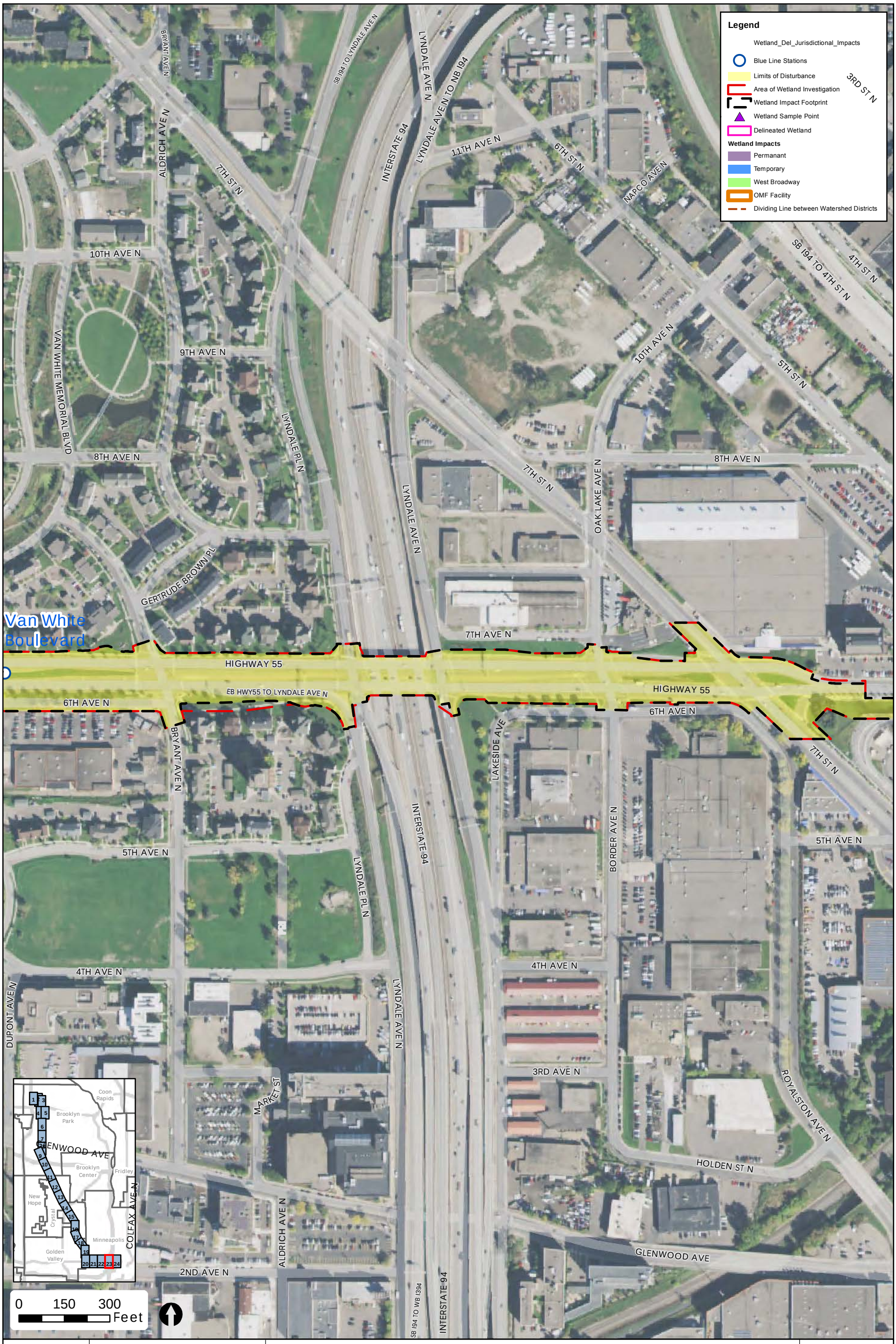

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., and SEH Inc.

Figure 2 - Wetlands
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METRO Blue Line Extension

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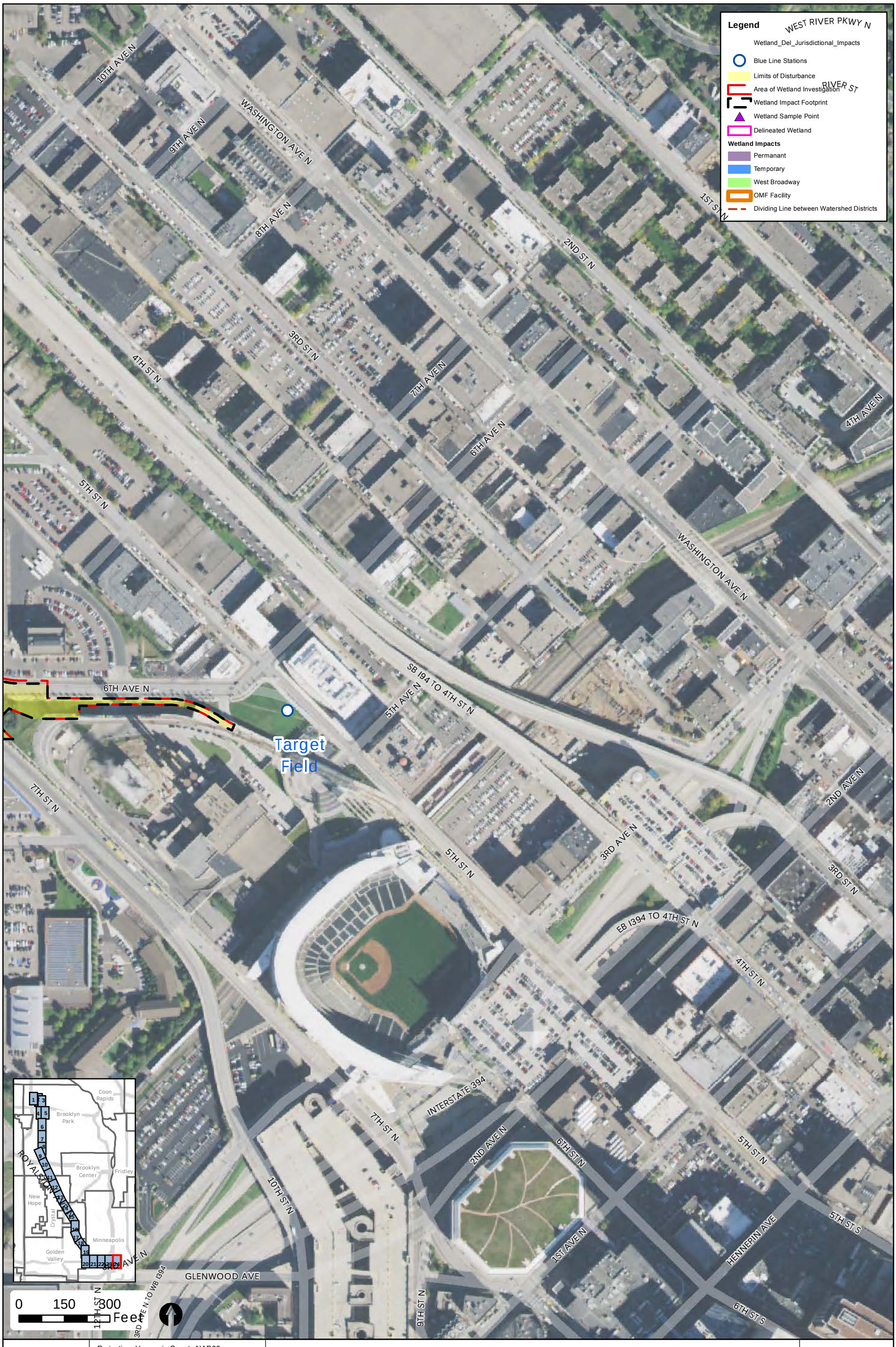

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., and SEH Inc.

Figure 2 - Wetlands
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METRO Blue Line Extension

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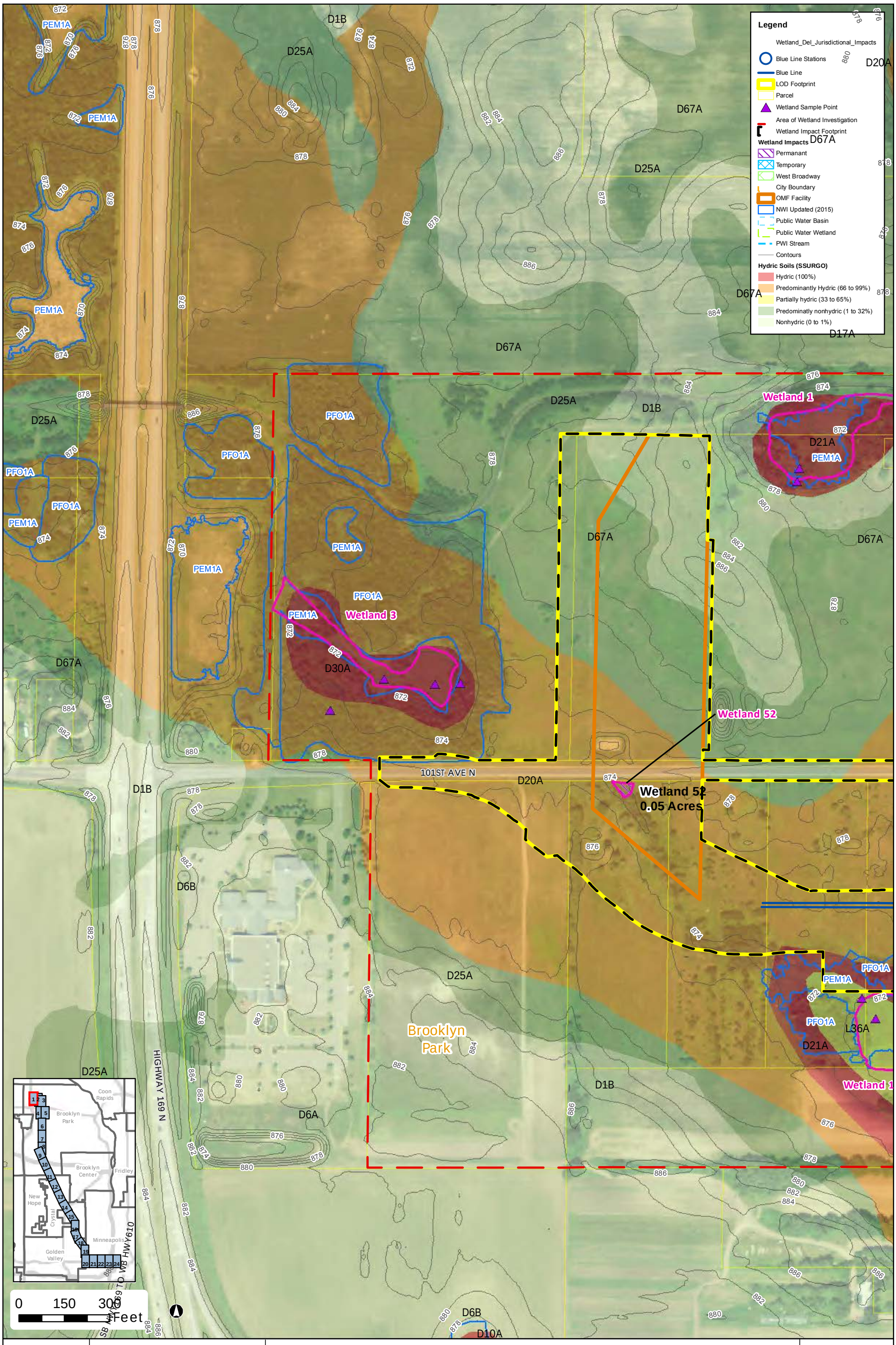
Date:5/16/2016



Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA.

Figure 3 - Hydric Soils
Page 1

METRO Blue Line Extension

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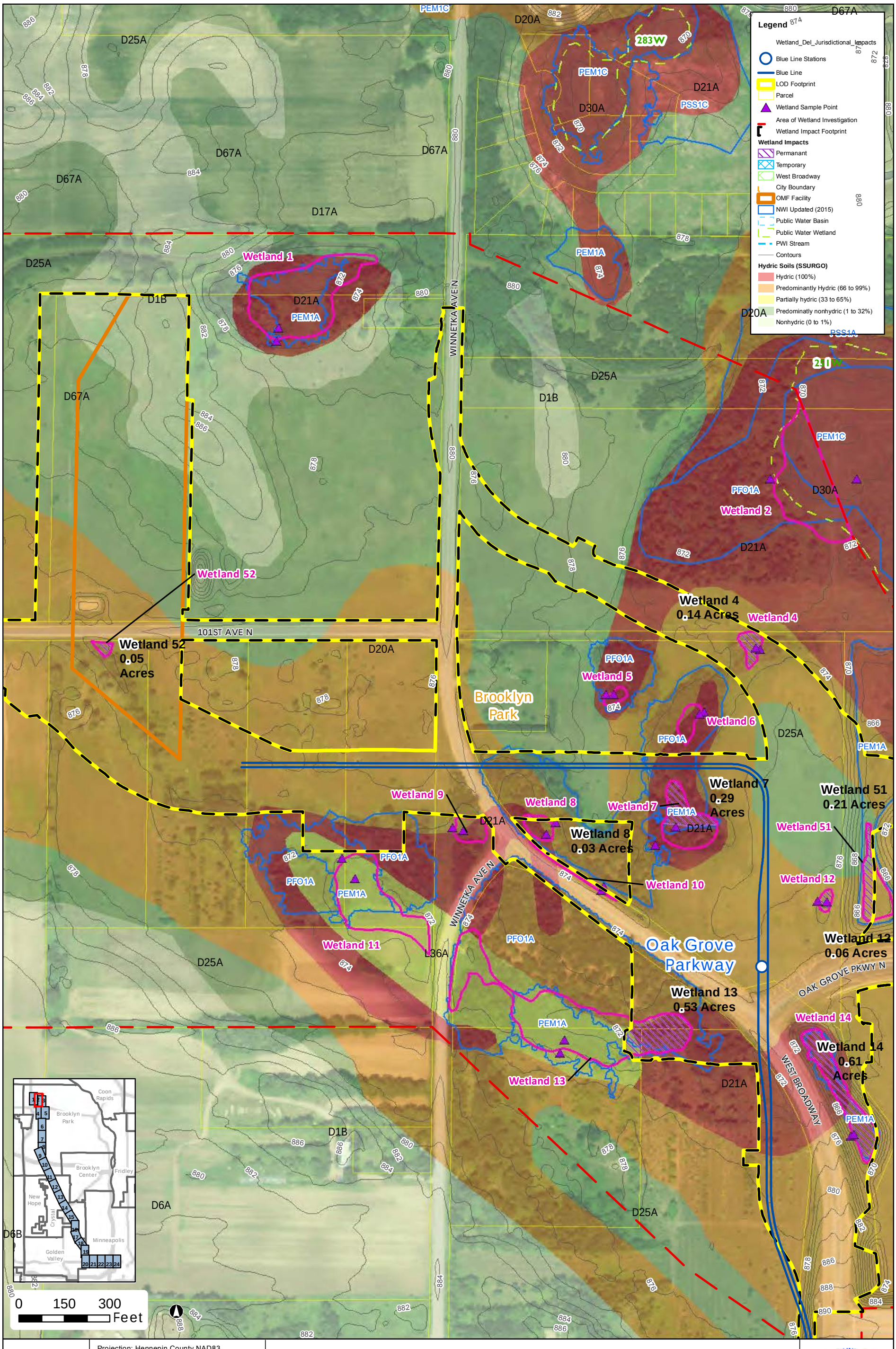

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA.

Figure 3 - Hydric Soils
Page 2

METRO Blue Line Extension

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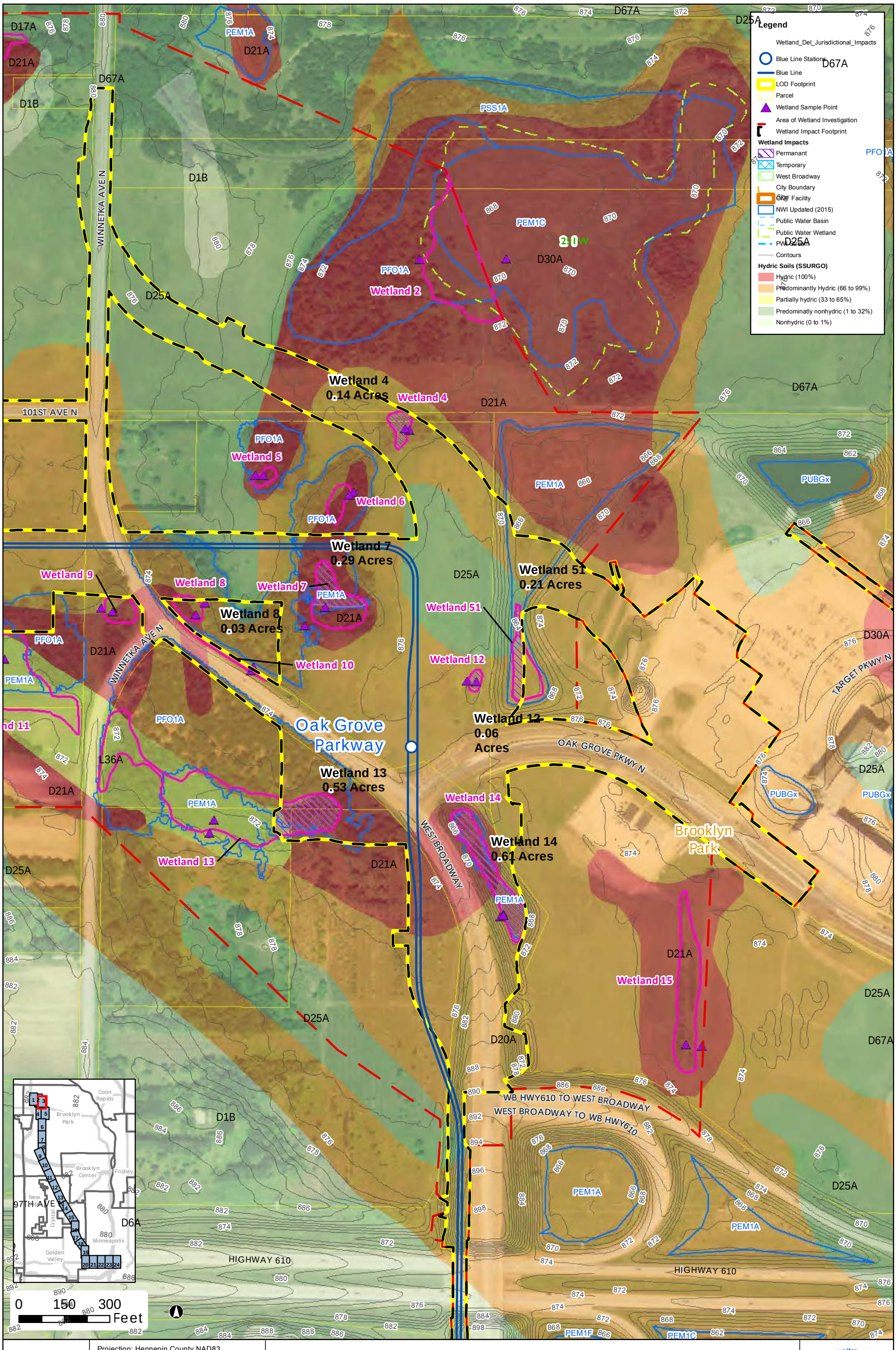
Legend
Wetland_Del_Jurisdictional_Impacts
Blue Line Stations
Blue Line
LOD Footprint
Parcel
Wetland Sample Point
Area of Wetland Investigation
Wetland Impact Footprint
Wetland Impacts
Permanant
Temporary
West Broadway
City Boundary
OMF Facility
NWI Updated (2015)
Public Water Basin
Public Water Wetland
PWI Stream
Contours
Hydric Soils (SSURGO)
Hydric (100%)
Predominantly Hydric (66 to 99%)
Partially hydric (33 to 65%)
Predominatly nonhydric (1 to 32%)
Nonhydric (0 to 1%)
Wetland 2
Wetland 4
0.14 Acres
Wetland 5
Wetland 6
Wetland 7
0.29 Acres
Wetland 8
0.03 Acres
Wetland 9
Wetland 10
Wetland 11
Wetland 12
0.06 Acres
Wetland 13
0.53 Acres
Wetland 14
0.61 Acres
Wetland 15
Wetland 51
0.21 Acres
WINNETKA AVE N
101ST AVE N
Oak Grove Parkway
OAK GROVE PKWY N
WEST BROADWAY
TARGET PKWY N
WB HWY610 TO WEST BROADWAY
WEST BROADWAY TO WB HWY610
HIGHWAY 610
97TH AVE
Brooklyn Park
Brooklyn Center
Coon Rapids
Fridley
New Hope
Crystal
Golden Valley
Minneapolis
0 150 300 Feet
Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA.
Figure 3 - Hydric Soils
Page 3
METRO Blue Line Extension
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METROPOLITAN COUNCIL
METRO BLUE LINE EXTENSION
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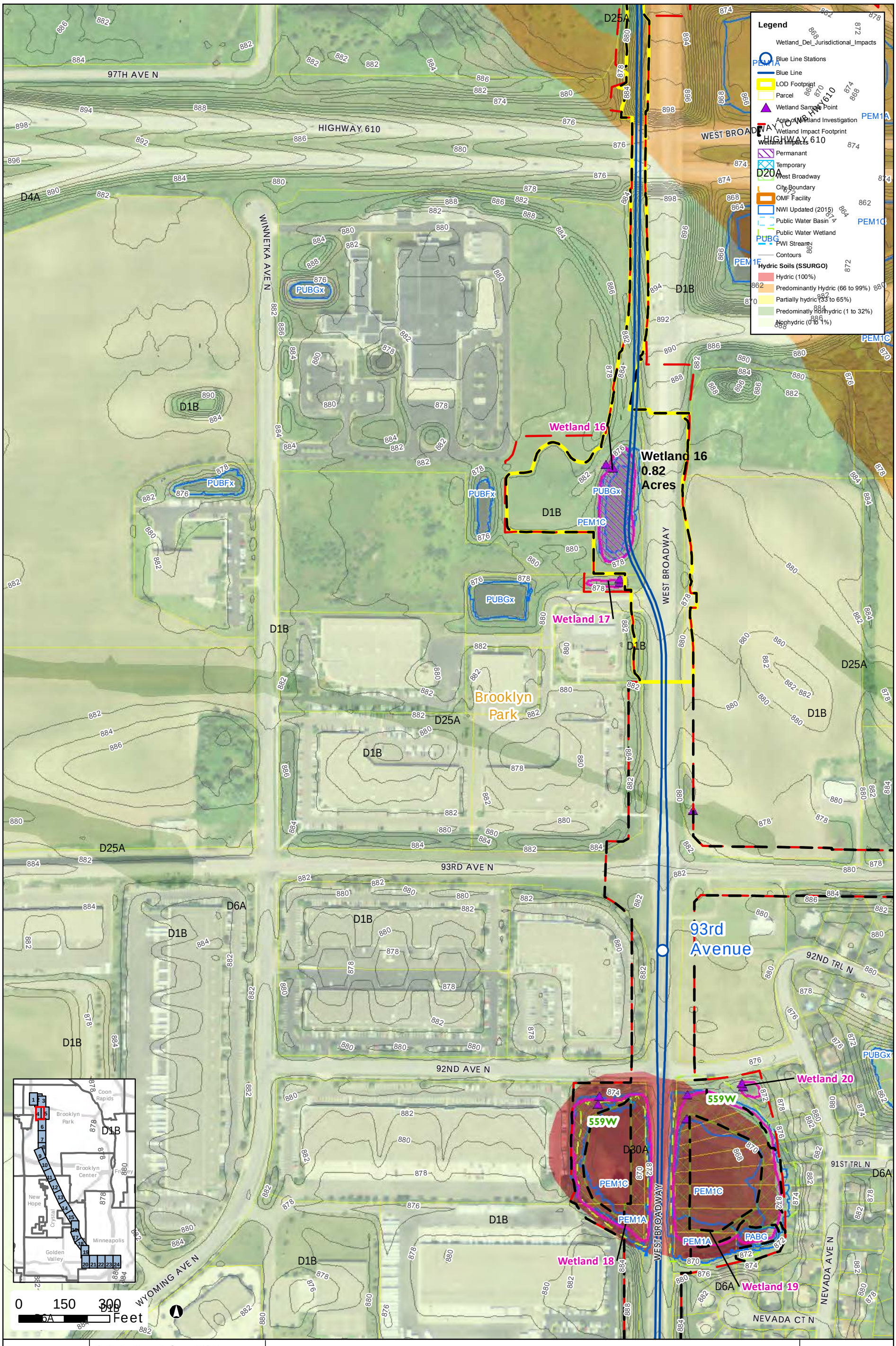

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA.

Figure 3 - Hydric Soils
Page 4

METRO Blue Line Extension

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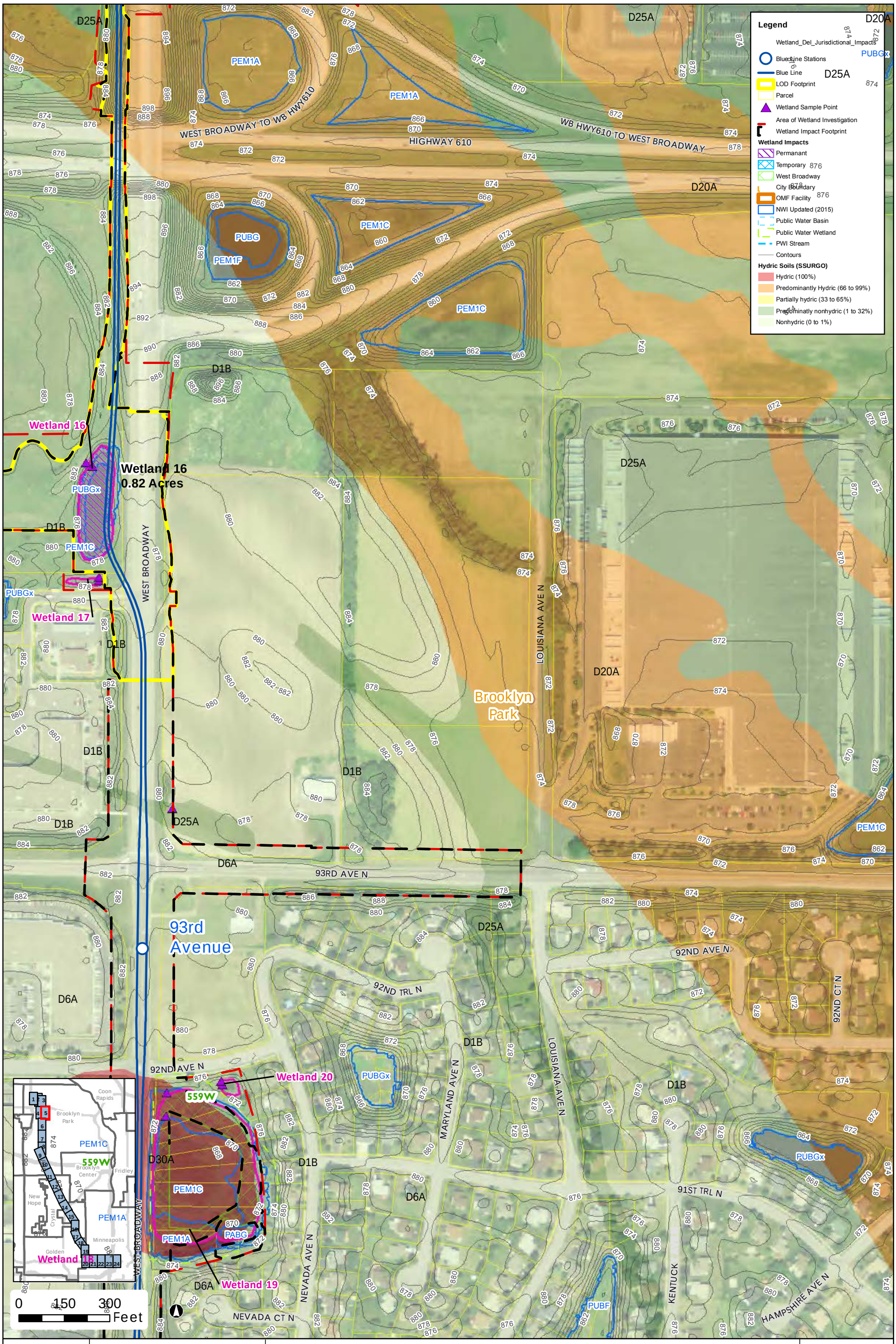

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA.

Figure 3 - Hydric Soils
Page 5

METRO Blue Line Extension

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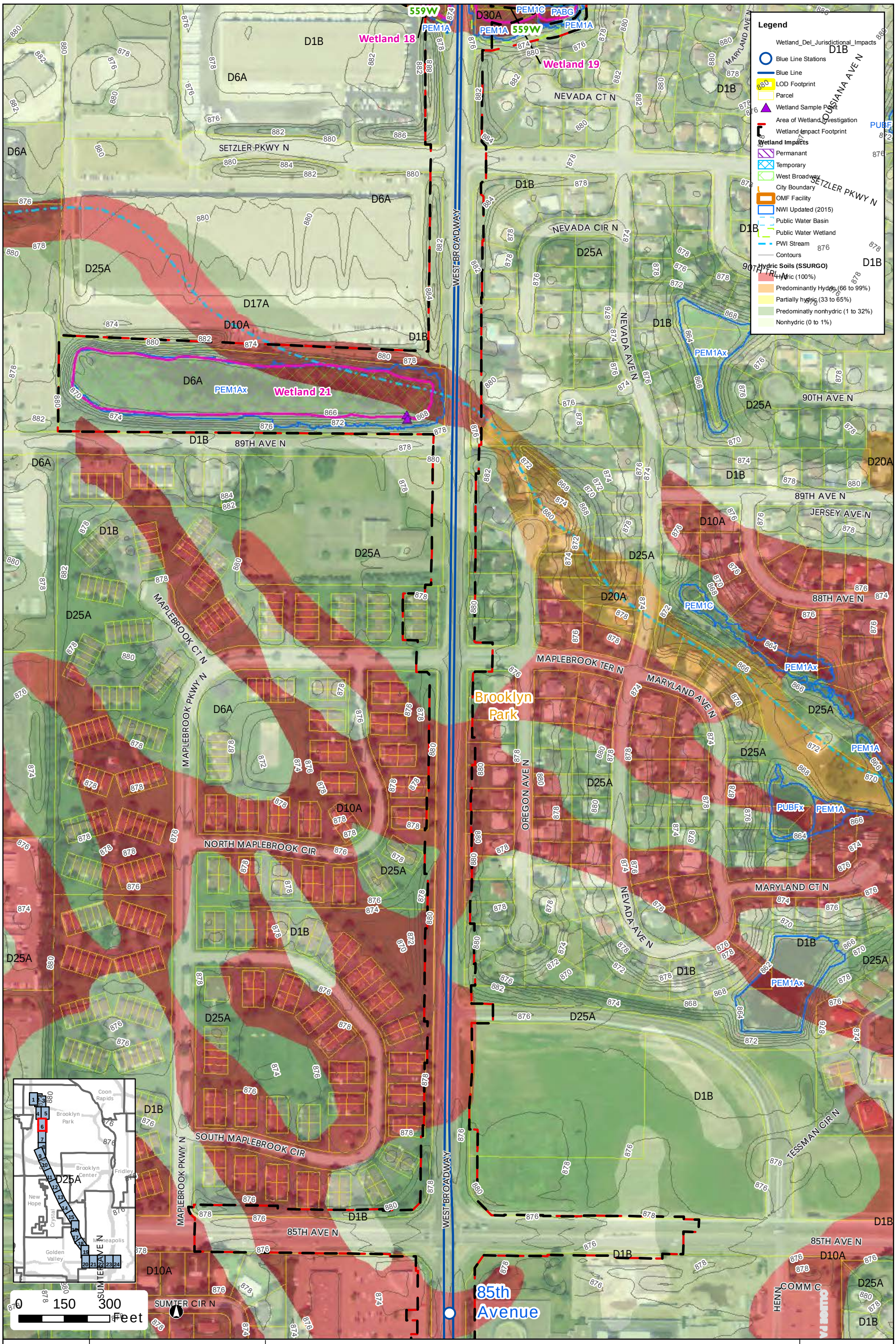

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA.

Figure 3 - Hydric Soils
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METRO Blue Line Extension

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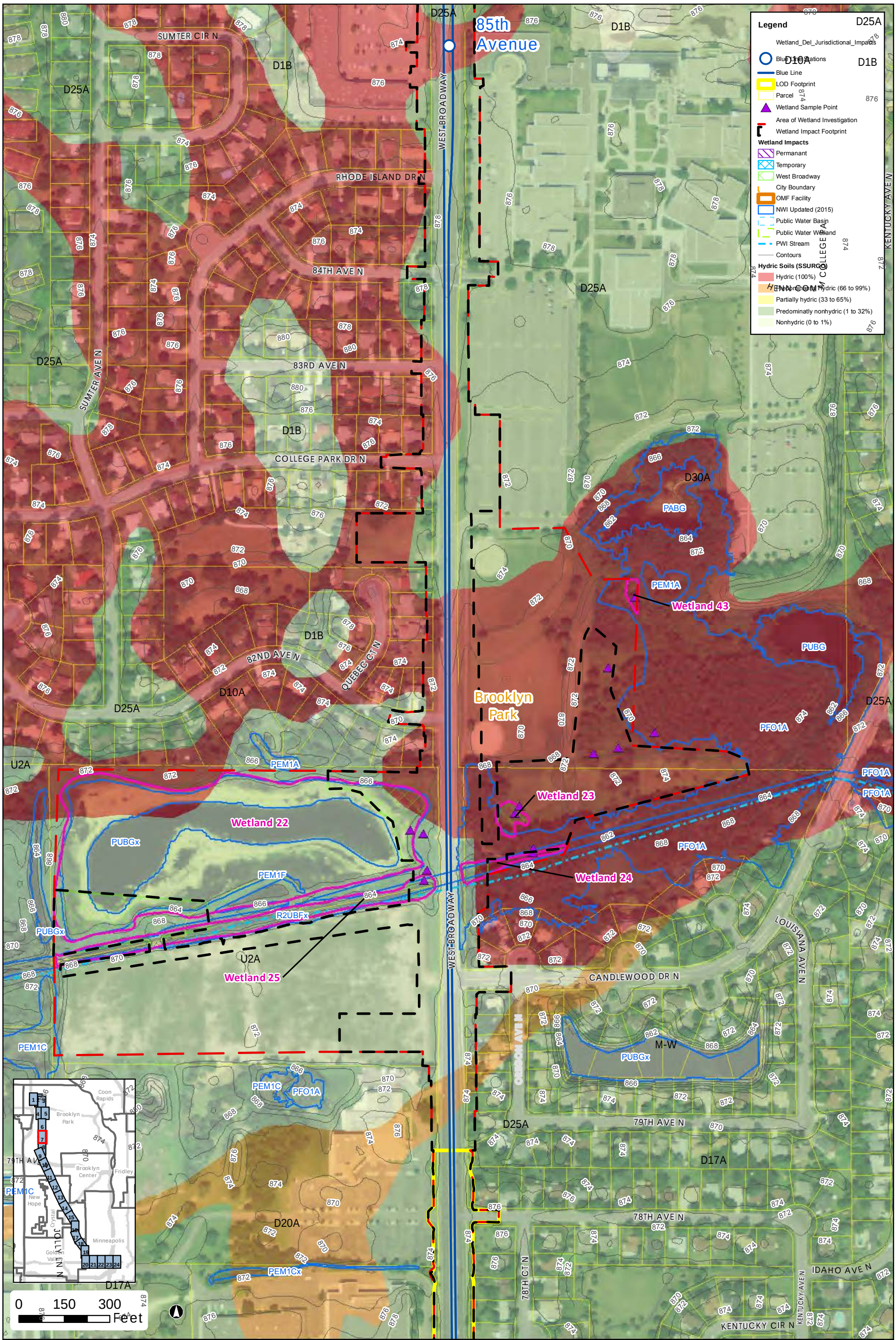

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA.

Figure 3 - Hydric Soils
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METRO Blue Line Extension

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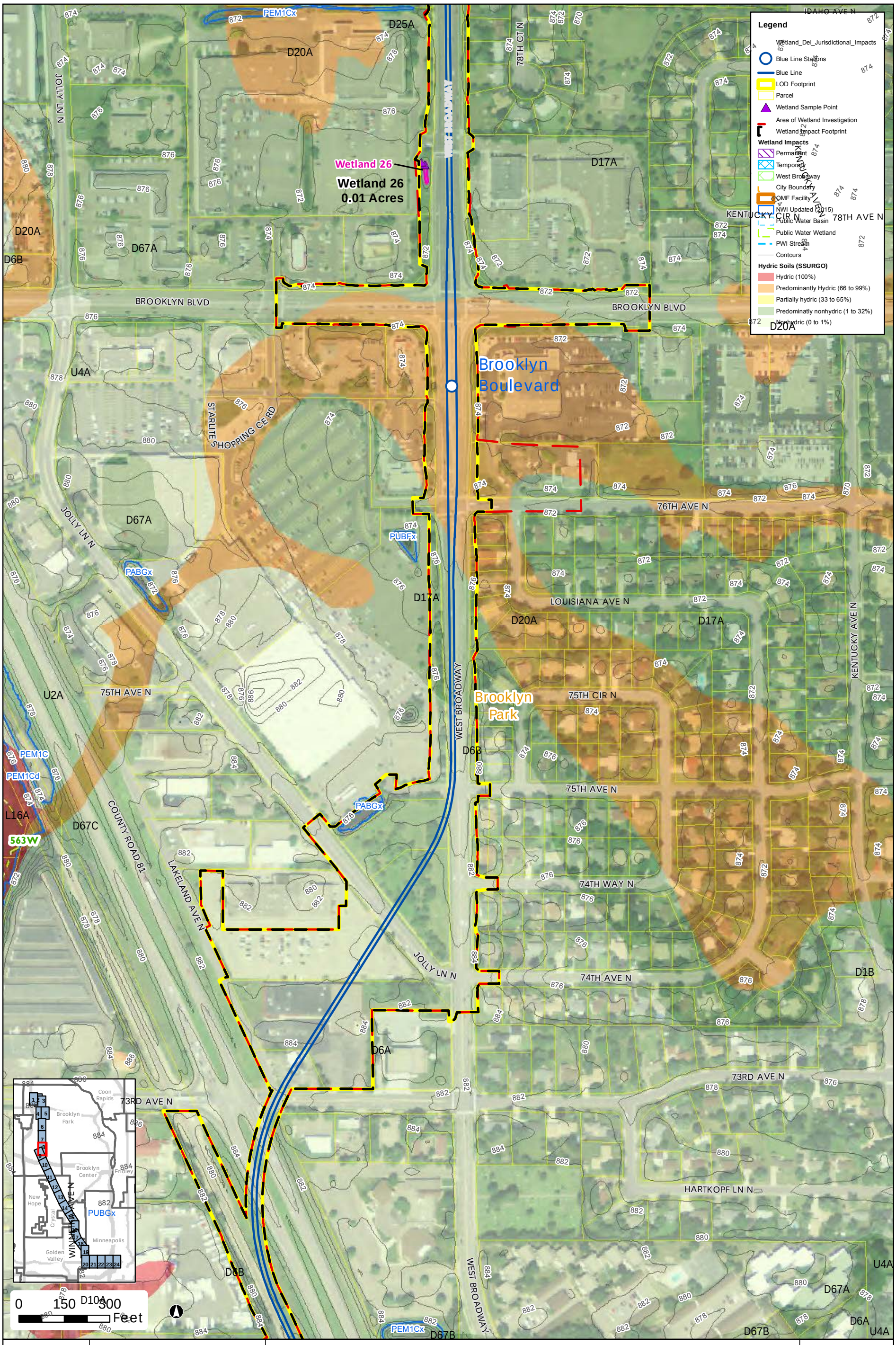

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA.

Figure 3 - Hydric Soils
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METRO Blue Line Extension

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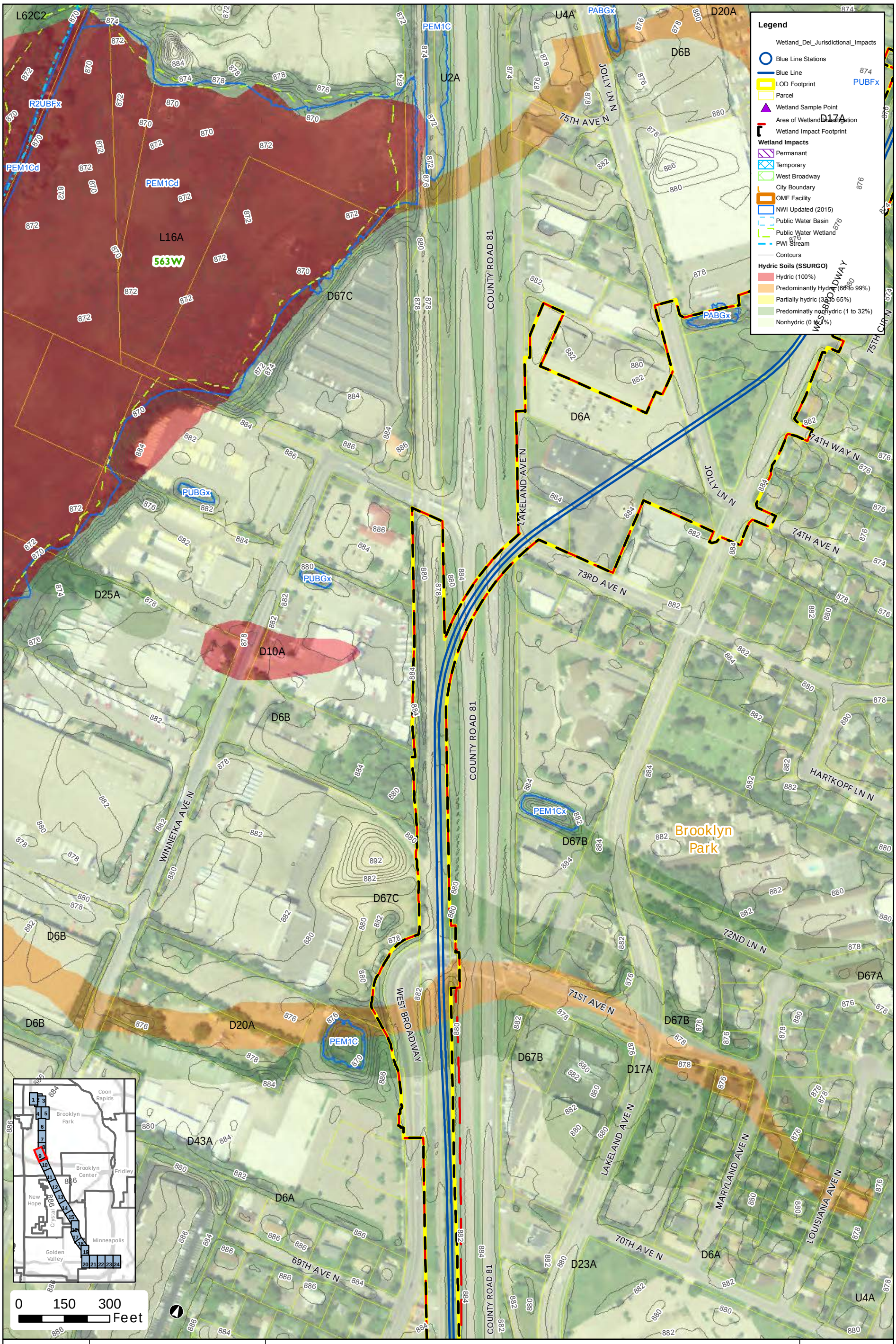

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA.

Figure 3 - Hydric Soils
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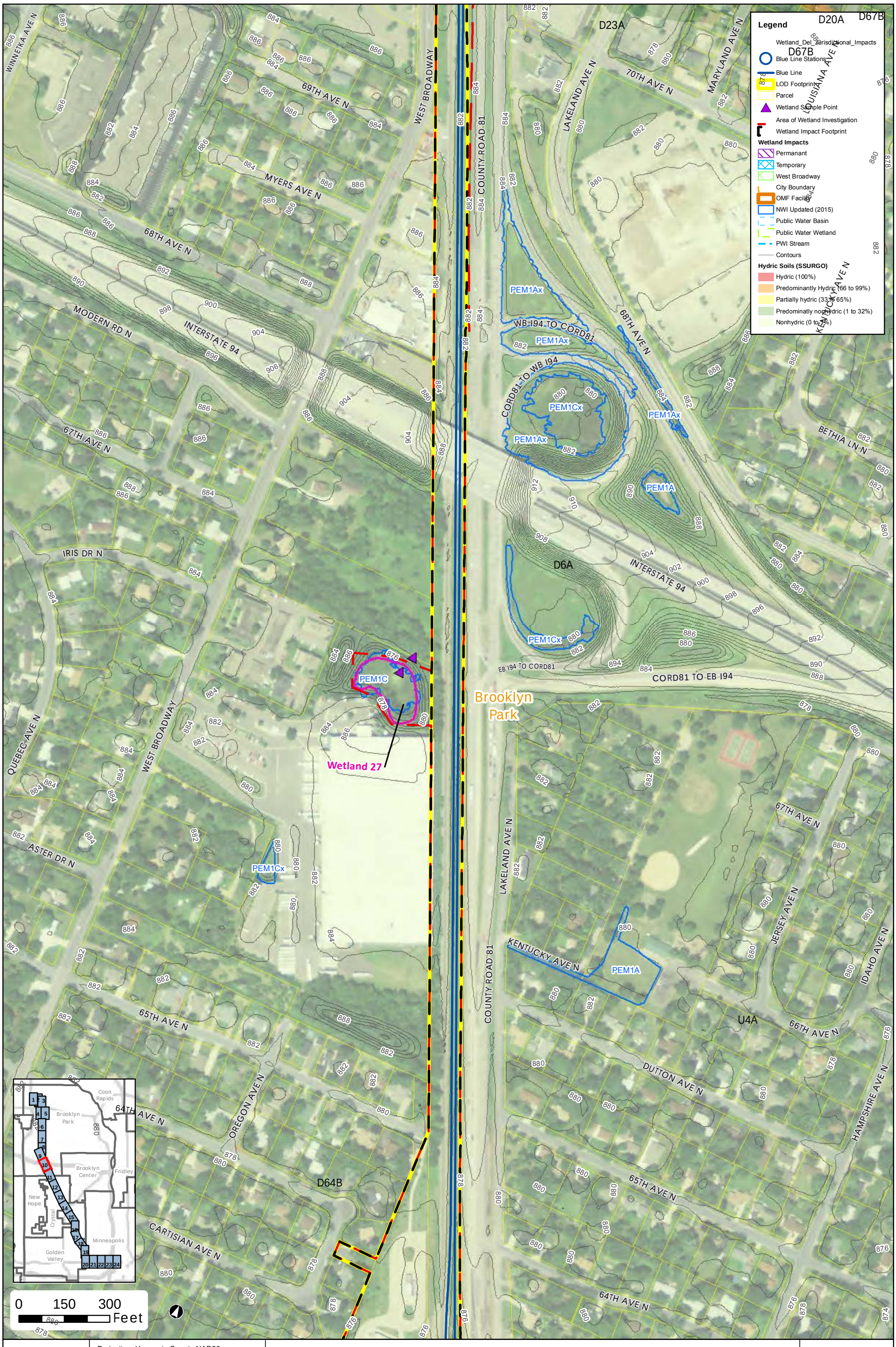

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA.

Figure 3 - Hydric Soils
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METRO Blue Line Extension

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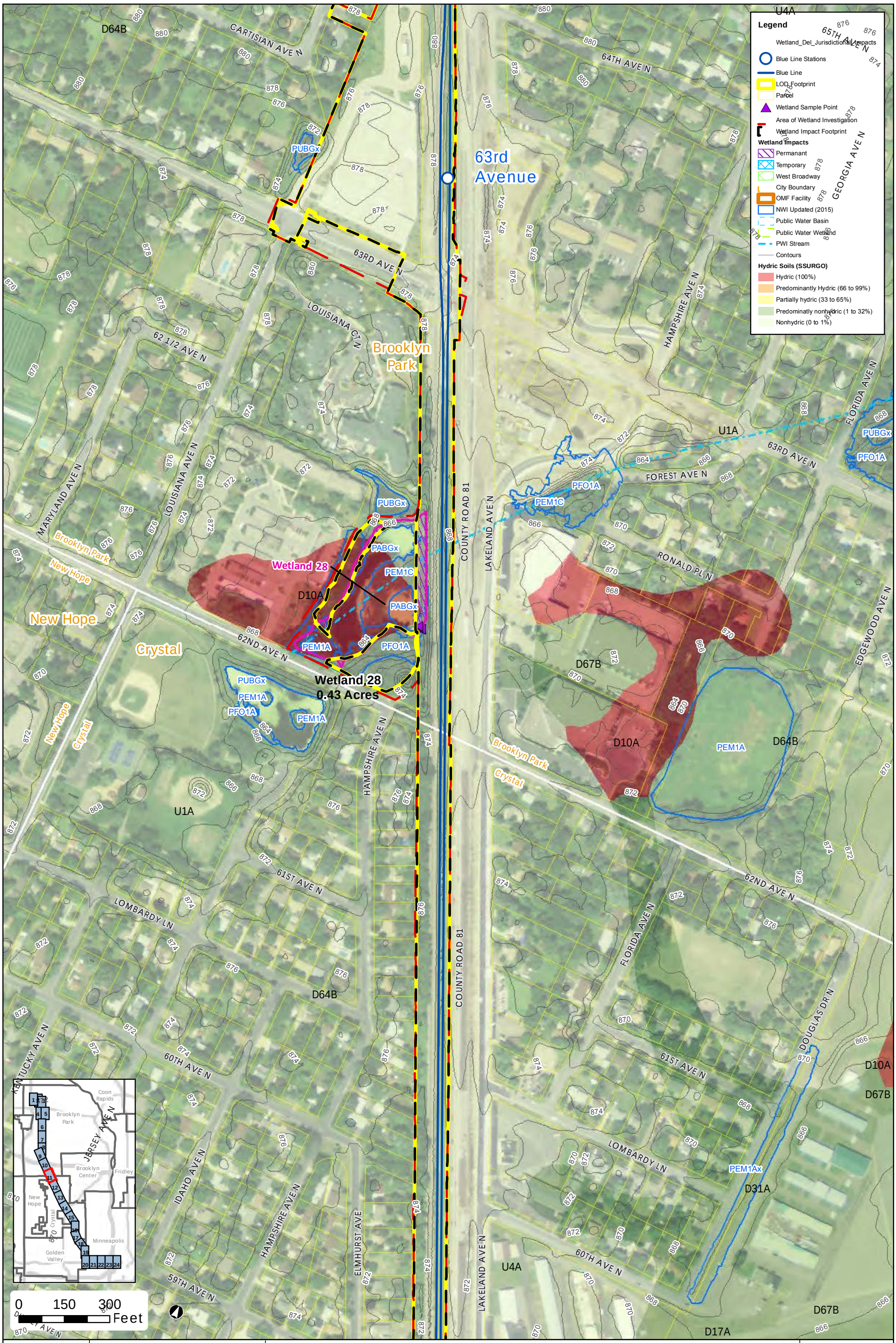

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA.

Figure 3 - Hydric Soils
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METRO Blue Line Extension

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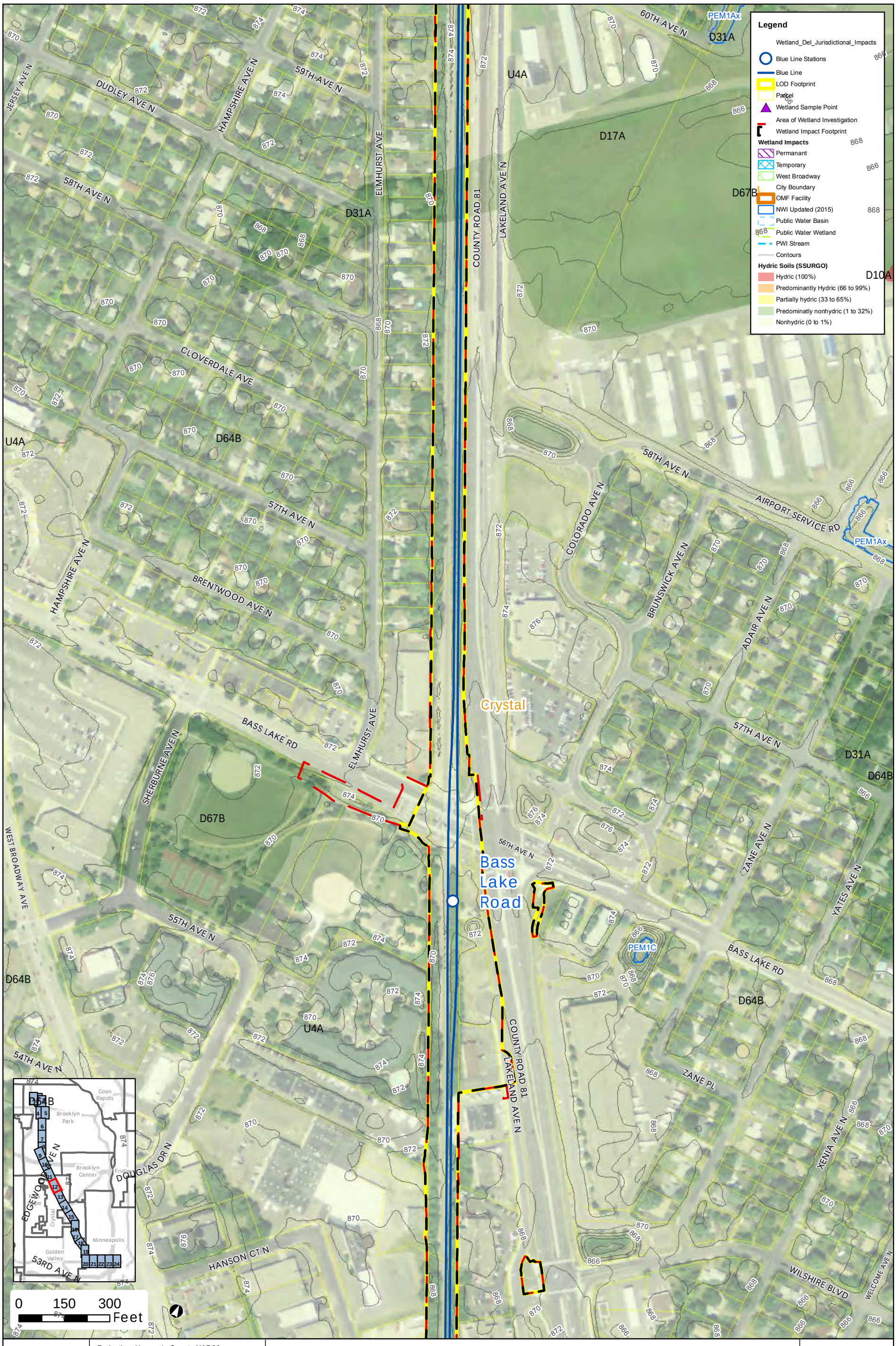

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA.

Figure 3 - Hydric Soils
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METRO Blue Line Extension

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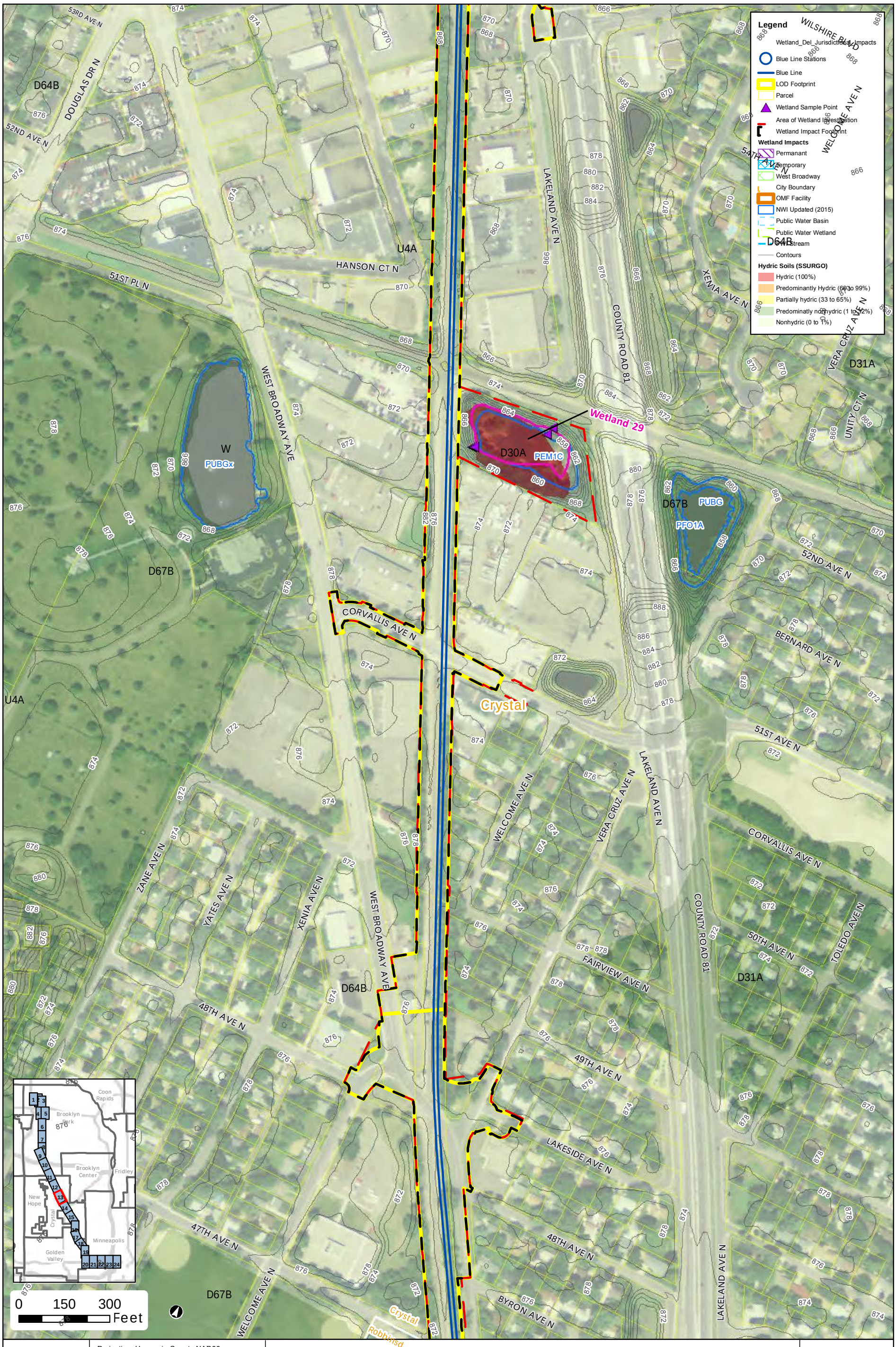

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Figure 3 - Hydric Soils

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METRO Blue Line Extension

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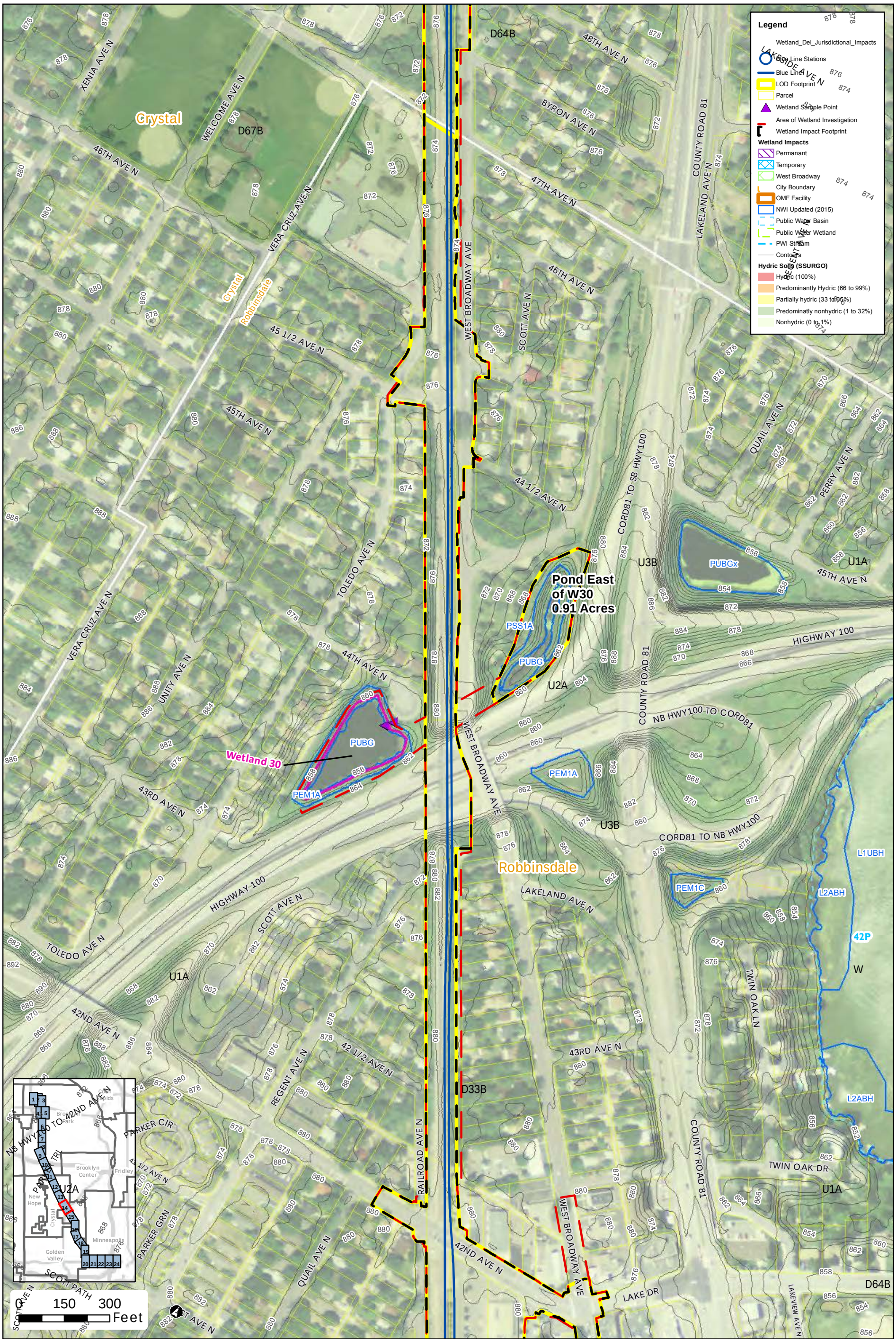

Projection: Hennepin County NAD83
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Figure 3 - Hydric Soils
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METRO Blue Line Extension

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Projection: Hennepin County NAD83
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Figure 3 - Hydric Soils
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METRO Blue Line Extension

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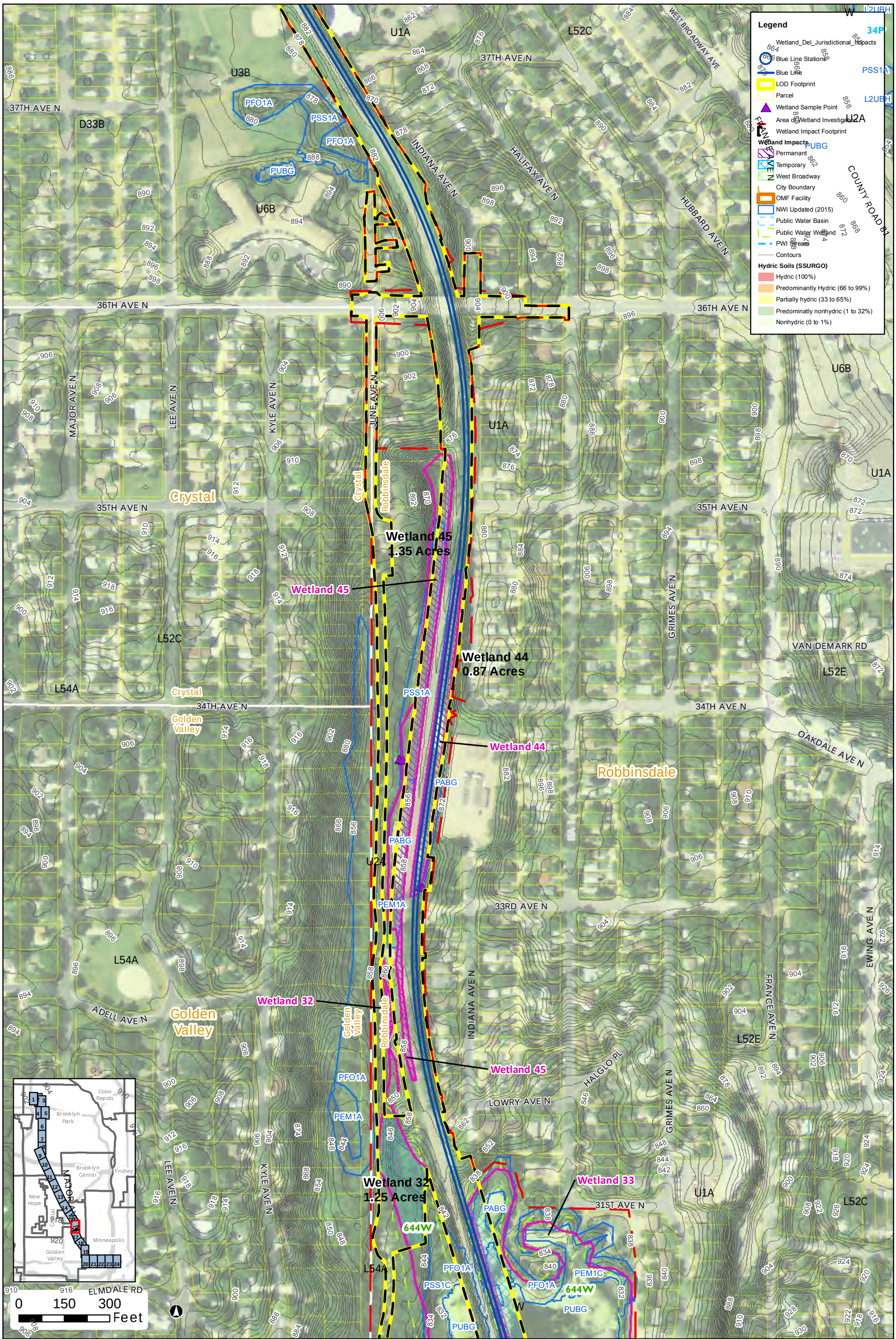

Projection: Hennepin County NAD83
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Figure 3 - Hydric Soils
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METRO Blue Line Extension

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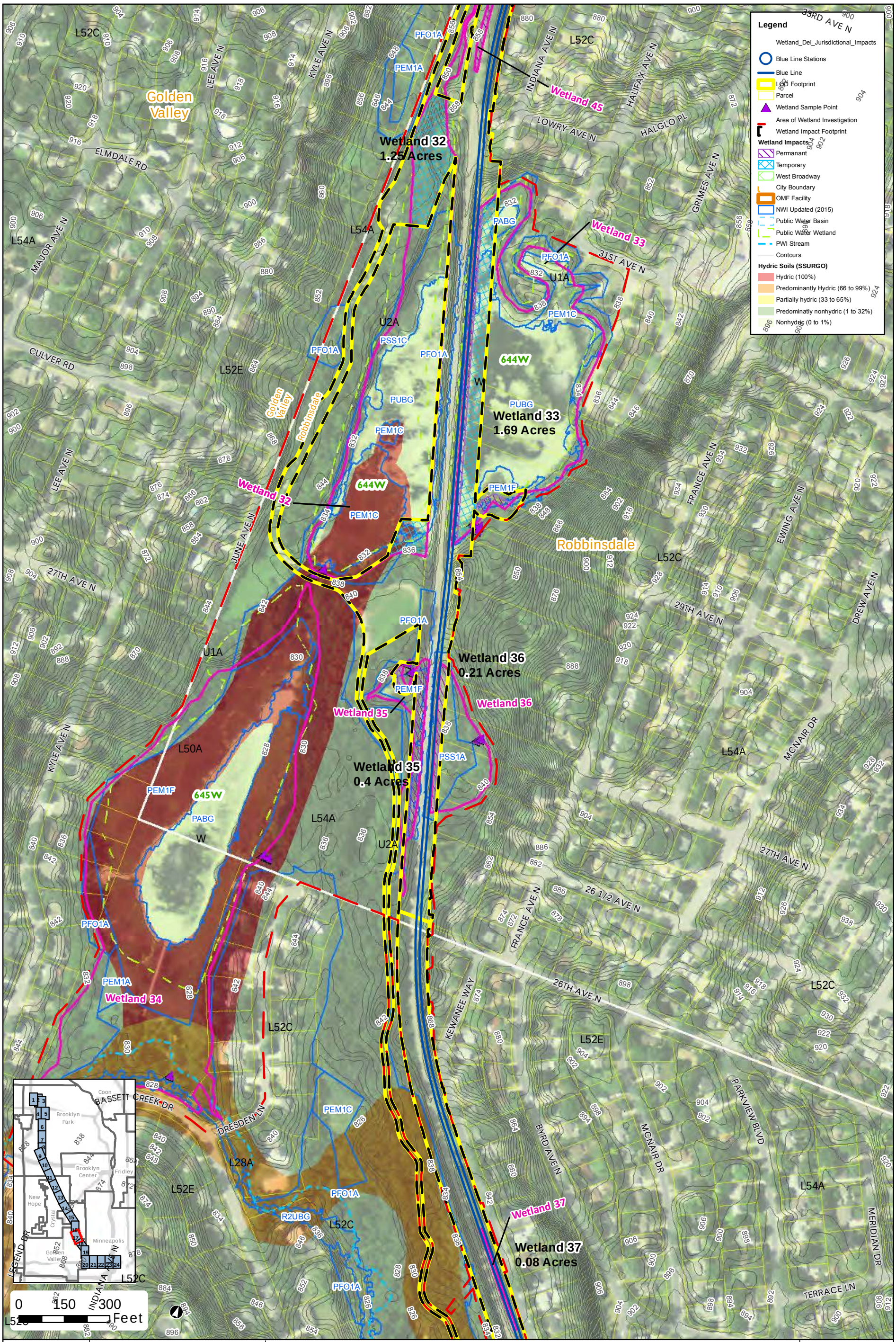

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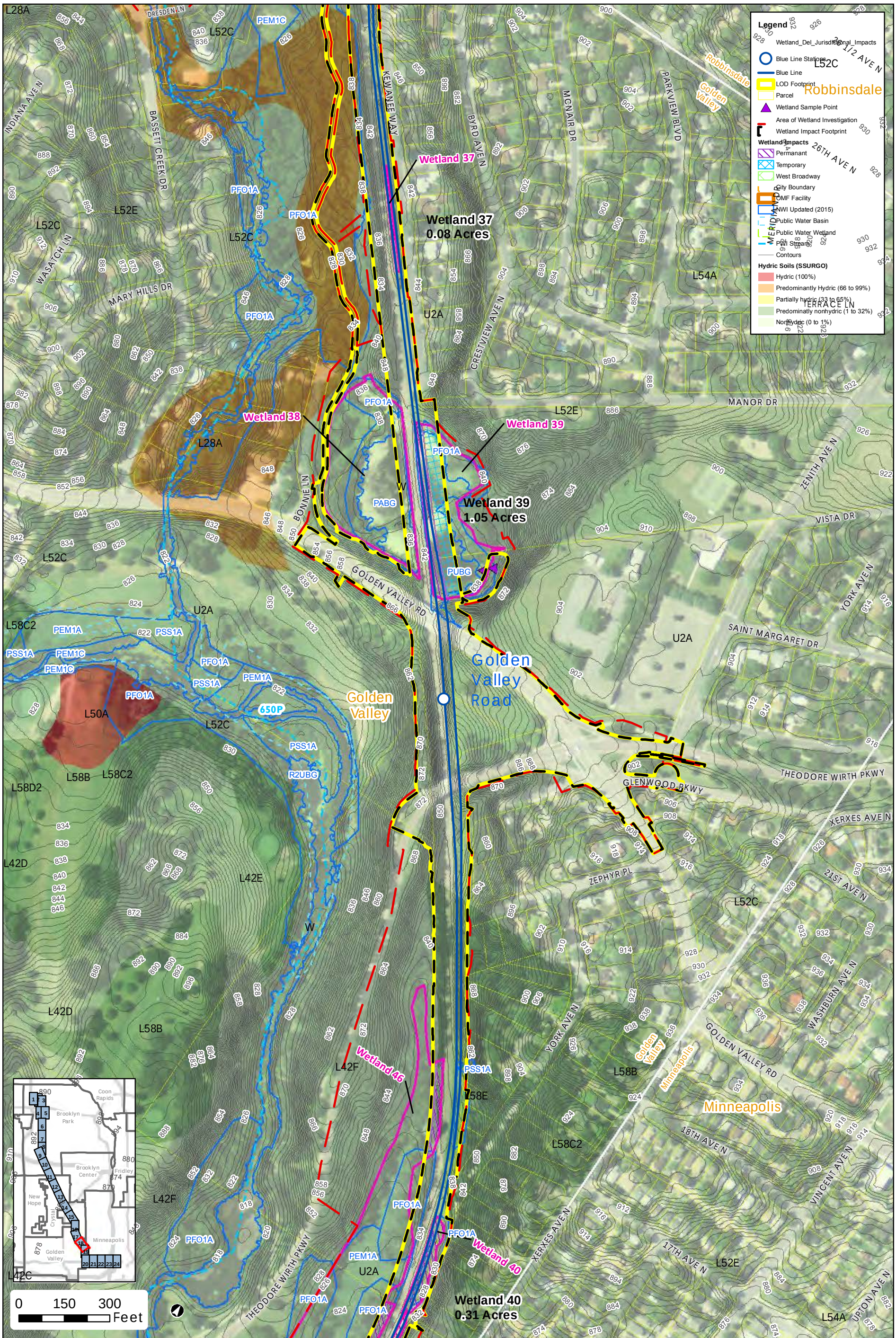

Projection: Hennepin County NAD83
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Figure 3 - Hydric Soils
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METRO Blue Line Extension

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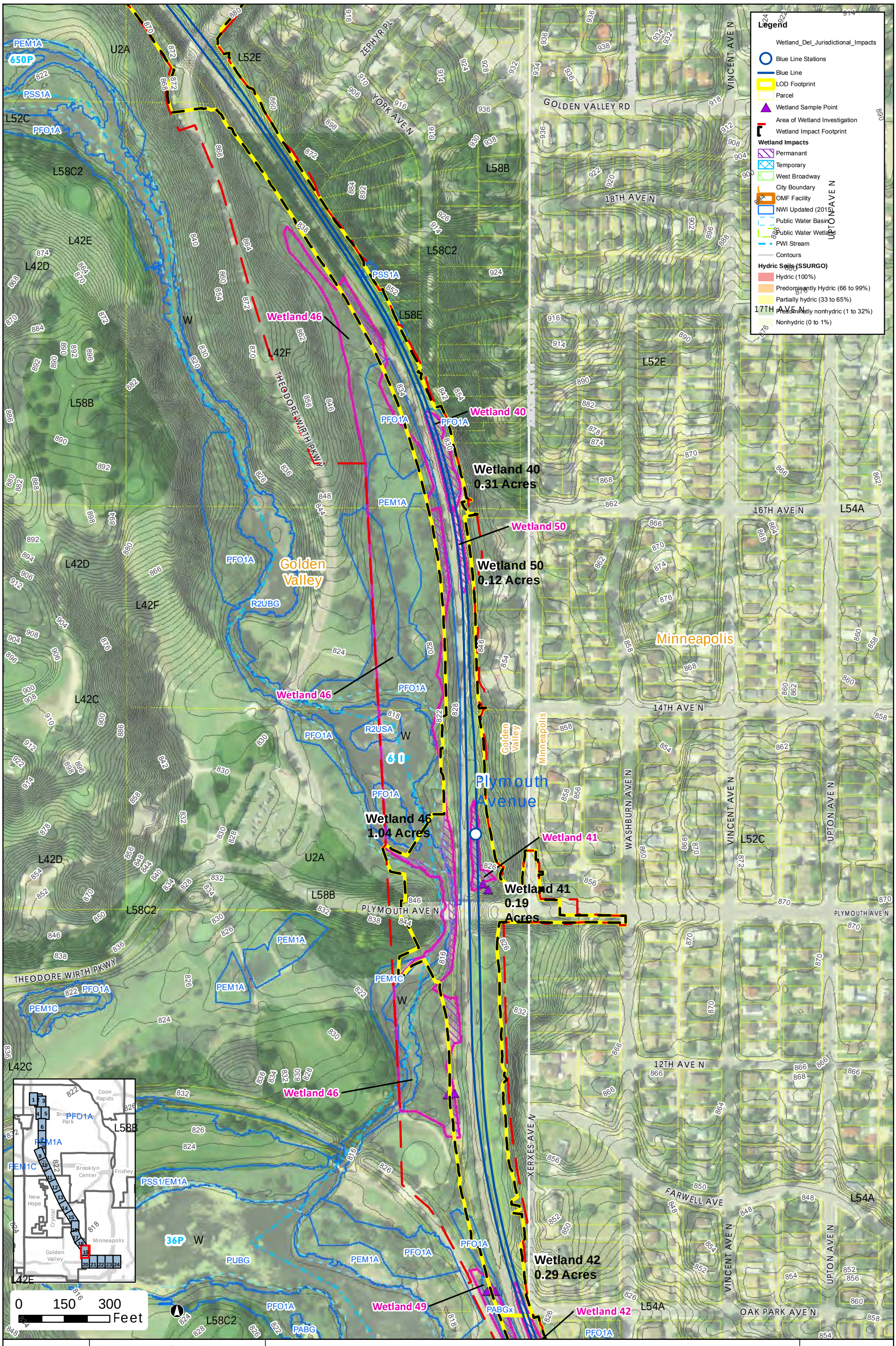

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Figure 3 - Hydric Soils
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METRO Blue Line Extension

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5/16/2016

Wetland 46
Wetland 42
0.29 Acres
Wetland 49
0.1 Acres
Wetland 48
0.15 Acres
Minneapolis
Golden Valley
XERXES AVE N
WASHBURN AVE N
UPTON AVE N
THOMAS AVE N
VINCENT AVE N
OAK PARK AVE N
FARWELL AVE
12TH AVE N
8TH AVE N
7TH AVE N
HIGHWAY 55
GLENWOOD AVE
YORK AVE
2ND AVE N
L58B
L52C
L54A
L42E
L58C2
L42B
L50A
L42C
L42D
L42F
L52C
U5A
U2A
L2UBH
L1UBH
PEM1C
R2UBG
PFO1A
PEM1A
PABG
PABGx
PUBG
PSS1/EM1A
PEM1F
36P
37P
W

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Contours
Hydric Soils (SSURGO)
Hydric (100%)
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Partially hydric (33 to 65%)
Predominatly nonhydric (1 to 32%)
Nonhydric (0 to 1%)

0 150 300 Feet

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA.

Figure 3 - Hydric Soils
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METRO Blue Line Extension

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METROPOLITAN COUNCIL

METRO BLUE LINE EXTENSION

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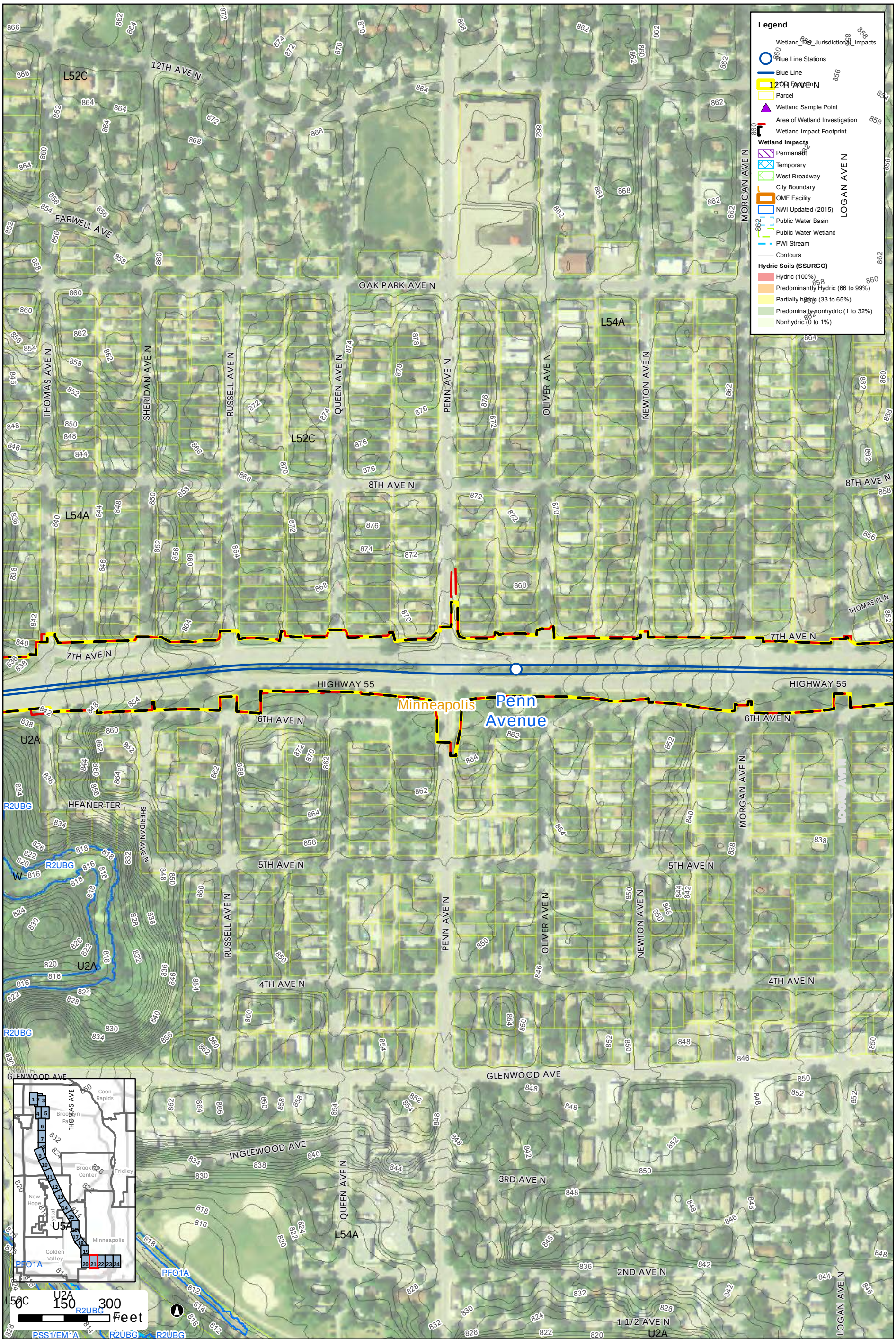

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA.

Figure 3 - Hydric Soils
Page 21

METRO Blue Line Extension

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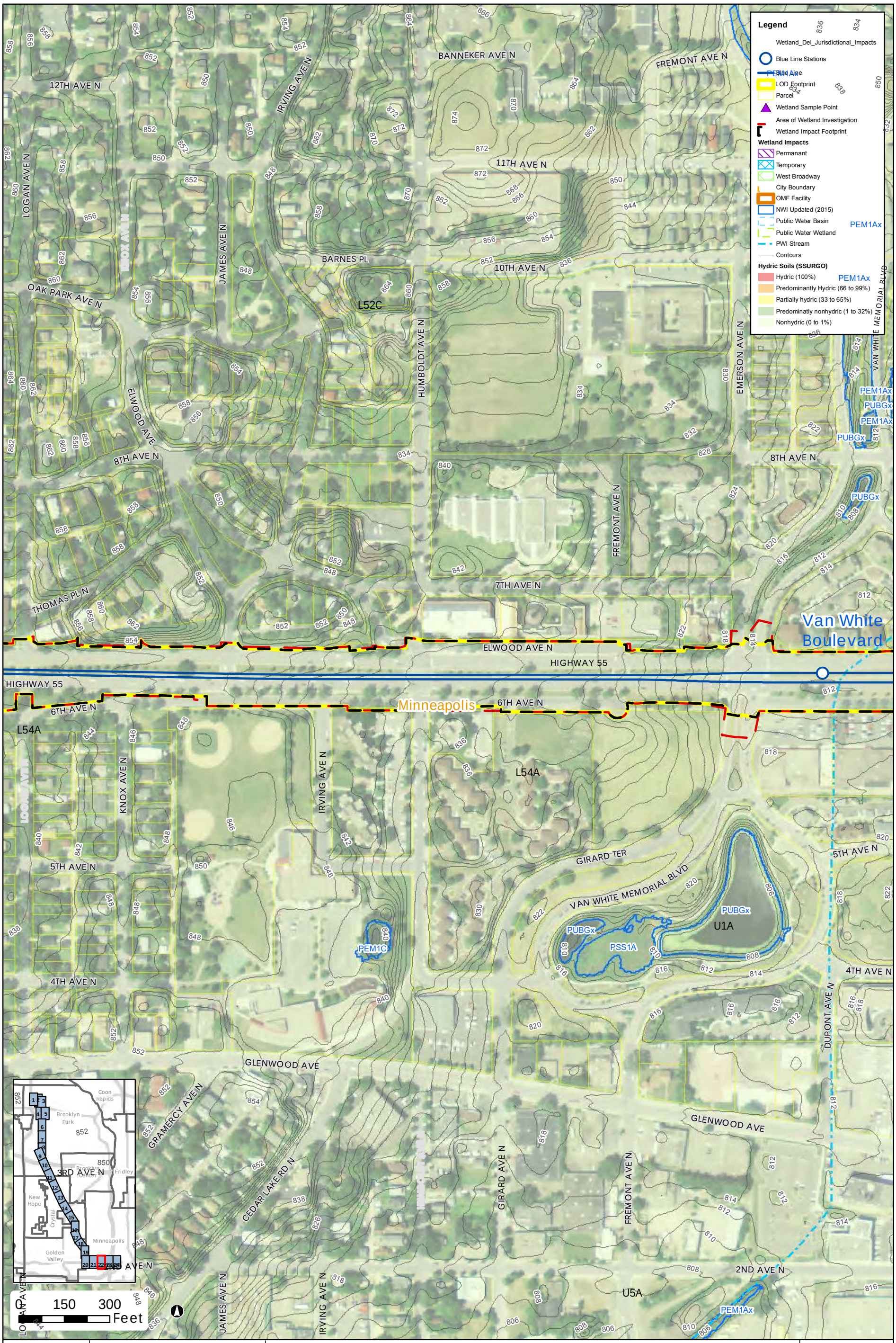
5/16/2016



Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA.

Figure 3 - Hydric Soils
Page 22

METRO Blue Line Extension

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METROPOLITAN COUNCIL

METRO BLUE LINE EXTENSION

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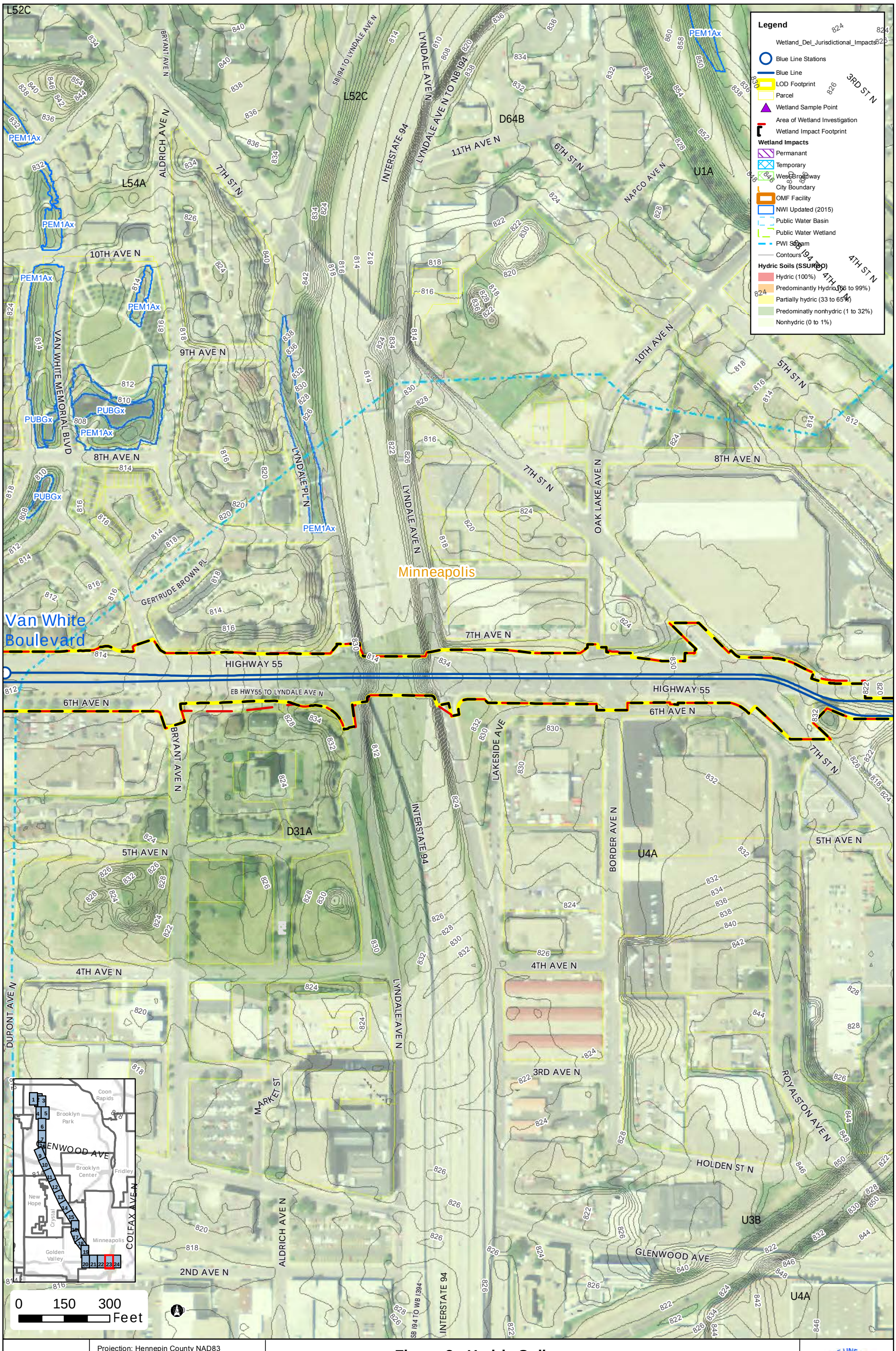
5/16/2016



Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc. and USDA.

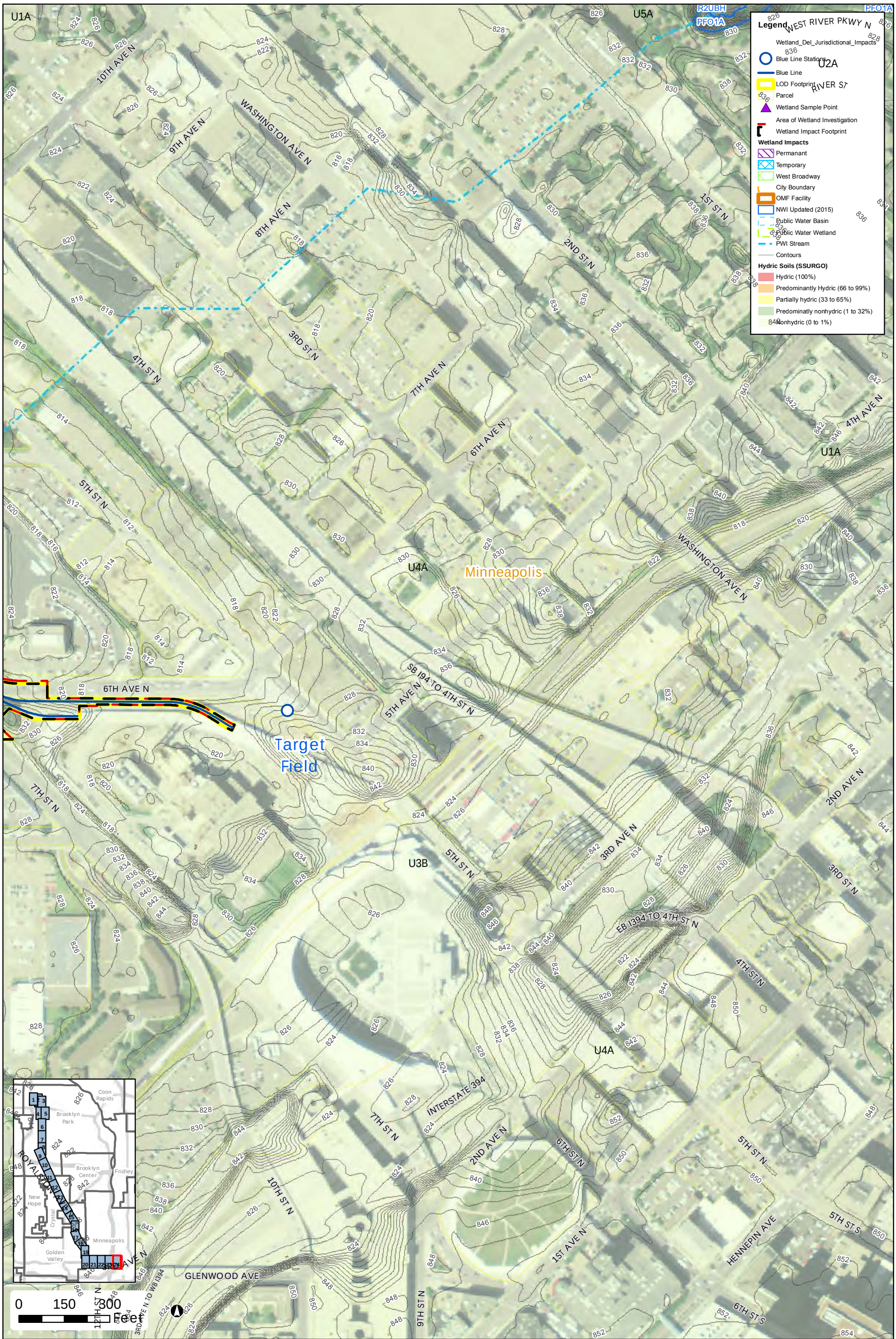
Figure 3 - Hydric Soils
Page 23

METRO Blue Line Extension

DRAFT

Document Path: \\mspe-gis-file\GISProj\MetCouncil\246482\map_docs\TechMemo\Wetland\Figure_3_BLRT_Wetland_TechMemo_HydricSoils_11x17P.mxd

5/16/2016



Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA.

Figure 3 - Hydric Soils
Page 24

METRO Blue Line Extension

DRAFT

5/16/2016

Document Path: \\mspe-gis-file\GISProj\MetCouncil\246482\map_docs\TechMemo\Wetland\Figure_3_BLRT_Wetland_TechMemo_HydricSoils_11x17P.mxd

Appendix A

Agency Correspondence

Minnesota Wetland Conservation Act
Notice of Decision

Local Government Unit (LGU)	Address
Bassett Creek Watershed Management Commission (BCWMC)	**7800 Golden Valley Road Golden Valley, MN 55427**

1. PROJECT INFORMATION

Applicant Name	Project Name	Date of Application	Application Number
Metropolitan Council	**Blue Line Light Rail Extension (LRT)**	**12/11/15**	

☒ Attach site locator map.

Type of Decision:

☒ Wetland Boundary or Type ☐ No-Loss ☐ Exemption ☐ Sequencing
☐ Replacement Plan ☐ Banking Plan

2. LOCAL GOVERNMENT UNIT DECISION

Date of Decision: **1/21/16**

☒ Approved ☐ Approved with conditions (include below) ☐ Denied

LGU Findings and Conclusions (attach additional sheets as necessary):

On behalf of the Metropolitan Council, SEH Inc. submitted a wetland delineation report for the Blue Line Light Rail Extension project located within Hennepin County in Brooklyn Park, Robbinsdale, Crystal, Golden Valley, and Minneapolis. The BCWMC is the WCA LGU for the portion of the project within the City of Robbinsdale and within the Bassett Creek Watershed, which is the area south of 36th Ave N. Wetlands associated with this project within the BCWMC jurisdiction are: W31, W32, W33, W34, W35, W36, W44, and W45. Note that W34 straddles both Robbinsdale and Golden Valley. For wetland delineation purposes, the BCWMC has reviewed W34.

The preliminary wetland maps and wetland data forms were submitted on 6/22/15 in preparation for a site review of the wetland boundaries which took place on 6/29/15. Present at the site review were Ben Meyer with BWSR, Stacey Lijewski with Hennepin County, Melissa Jenny with the USACE, Adam Arvidson with the Minneapolis Park and Rec Board, Jeff Olson with SEH for the applicant, and Karen Wold with Barr for the City of Minneapolis, Bassett Creek WMC portion of Robbinsdale, and Golden Valley. Wetland edits were completed based on initial comments and a complete wetland delineation report was submitted on 12/11/15.

During a TEP meeting on 12/8/15, each LGU clarified that they would each retain jurisdiction for their portions of this project.

During the comment period, Karen Wold requested some minor wetland type revisions and wetland size designations. Based on these comments, SEH submitted a revised wetland summary table on 1/4/16, which was provided to the TEP on 1/5/16 and is also attached in this document. No other comments were received during the comment period.

The updated wetland summary table includes the following wetland types and sizes for wetlands within BCWMC jurisdiction:

Wetland ID	Field Verified Cowardin	Eggers & Reed Class.	Circ. 39 Class.	Basin Size (ac)
W31	PSS1A	Shrub Carr	Type 6	Part of W32
W32	PFO1A/PEMC/PSS1C	Floodplain forest/shallow marsh/shrub-carr	Type 1/Type 3/Type 6	7.71
W33	PUBGx	Open Water	Type 5	7.41
W34	PEM1F	Deep Marsh	Type 4	17.01
W35	PFO1A	Floodplain forest	Type 1	0.85
W36	PSS1A	Shrub Carr	Type 6	1.39
W44	PUBGx	Open Water	Type 5	0.87
W45	PFO1A	Floodplain forest	Type 1	11.14

Note: Wetland Types per Circular 39 indicate the majority of wetland types within a delineated basin. Several other minor wetland types may also be present within the basin.

The wetland boundaries and updated wetland types were found to be accurate, based on the requirements of the 1987 USACE Wetland Delineation Manual, the 2010 Midwest Regional Supplement, and the 2015 Guidance for Submittal of Delineation Reports to the USACE and WCA LGU in Minnesota, Version 2.0.

The BCWMC approves the wetland boundaries and types.

For Replacement Plans using credits from the State Wetland Bank:

Bank Account #	Bank Service Area	County	Credits Approved for Withdrawal (sq. ft. or nearest .01 acre)

Replacement Plan Approval Conditions. In addition to any conditions specified by the LGU, the approval of a Wetland Replacement Plan is conditional upon the following:

☐ **Financial Assurance:** For project-specific replacement that is not in-advance, a financial assurance specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9 (List amount and type in LGU Findings).

☐ **Deed Recording:** For project-specific replacement, evidence must be provided to the LGU that the BWSR "Declaration of Restrictions and Covenants" and "Consent to Replacement Wetland" forms have been filed with the county recorder's office in which the replacement wetland is located.

☐ **Credit Withdrawal:** For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan.

Wetlands may not be impacted until all applicable conditions have been met!

LGU Authorized Signature:

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 5 provides notice that a decision was made by the LGU under the Wetland Conservation Act as specified above. If additional details on the decision exist, they have been provided to the landowner and are available from the LGU upon request.

Name	Title	
Jim de Lambert	BCWMC Chair	
Signature	Date	Phone Number and E-mail
	1/31/2018	612-750-6680

THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT. Additional approvals or permits from local, state, and federal agencies may be required. Check with all appropriate authorities before commencing work in or near wetlands.

Applicants proceed at their own risk if work authorized by this decision is started before the time period for appeal (30 days) has expired. If this decision is reversed or revised under appeal, the applicant may be responsible for restoring or replacing all wetland impacts.

This decision is valid for five years from the date of decision unless a longer period is advised by the TEP and specified in this notice of decision.

3. APPEAL OF THIS DECISION

Pursuant to MN Rule 8420.0905, any appeal of this decision can only be commenced by mailing a petition for appeal, including applicable fee, within thirty (30) calendar days of the date of the mailing of this Notice to the following as indicated:

Check one:

☐ Appeal of an LGU staff decision. Send petition and $_____ fee (if applicable) to:	☒ Appeal of LGU governing body decision. Send petition and $500 filing fee to: Executive Director Minnesota Board of Water and Soil Resources 520 Lafayette Road North St. Paul, MN 55155

4. LIST OF ADDRESSEES

☒ SWCD TEP member: **Stacey Lijewski**
☒ BWSR TEP member: **Ben Meyer**
☒ DNR TEP member: **Leslie Parris, Kate Drewry**
☒ WD or WMO (if applicable): **Laura Jester (BCWMC), Jim Herbert (Barr)**
☒ Applicant and Landowner (if different) **agent Jeff Olson (SEH)**
☒ City of Robbinsdale: **Richard McCoy**
☒ Corps of Engineers Project Manager **Melissa Jenny**

5. MAILING INFORMATION

➢For a list of BWSR TEP representatives: www.bwsr.state.mn.us/aboutbwsr/workareas/WCA_areas.pdf
➢For a list of DNR TEP representatives: www.bwsr.state.mn.us/wetlands/wca/DNR_TEP_contacts.pdf
➢Department of Natural Resources Regional Offices:

NW Region:	NE Region:	Central Region:	Southern Region:
Reg. Env. Assess. Ecol. Div. Ecol. Resources 2115 Birchmont Beach Rd. NE Bemidji, MN 56601	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1201 E. Hwy. 2 Grand Rapids, MN 55744	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1200 Warner Road St. Paul, MN 55106	Reg. Env. Assess. Ecol. Div. Ecol. Resources 261 Hwy. 15 South New Ulm, MN 56073

For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf
➢For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687 or send to:

US Army Corps of Engineers
St. Paul District, ATTN: OP-R
180 Fifth St. East, Suite 700
St. Paul, MN 55101-1678

➢For Wetland Bank Plan applications, also send a copy of the application to:

Minnesota Board of Water and Soil Resources
Wetland Bank Coordinator
520 Lafayette Road North
St. Paul, MN 55155

6. ATTACHMENTS

In addition to the site locator map, list any other attachments:
☒ **Updated wetland summary table**
☒ **Wetland delineation maps**

Minnesota Wetland Conservation Act
Notice of Decision

Local Government Unit (LGU)	Address
City of Golden Valley	**7800 Golden VAlley Road Golden Valley, MN 55427**

1. PROJECT INFORMATION

Applicant Name	Project Name	Date of Application	Application Number
Metropolitan Council	**Blue Line Light Rail Extension (LRT)**	**12/11/15**	

☒ Attach site locator map.

Type of Decision:

☒ Wetland Boundary or Type ☐ No-Loss ☐ Exemption ☐ Sequencing
☐ Replacement Plan ☐ Banking Plan

2. LOCAL GOVERNMENT UNIT DECISION

Date of Decision: **1/21/16**

☒ Approved ☐ Approved with conditions (include below) ☐ Denied

LGU Findings and Conclusions (attach additional sheets as necessary):

On behalf of the Metropolitan Council, SEH Inc. submitted a wetland delineation for the Blue Line Light Rail Extension project located within Hennepin County in Brooklyn Park, Robbinsdale, Crystal, Golden Valley, and Minneapolis. The City of Golden Valley is the WCA LGU for the portion of the project within Golden Valley. Wetlands associated with this project within the City of Golden Valley are: W34, W37, W38, W39, W40, W41, W42, W46, W47, W49, W50. Note that W34 straddles both Robbinsdale and Golden Valley. For wetland delineation purposes, the Bassett Creek WMC has reviewed W34. In addition, W42 and W49 straddle both Golden Valley and Minneapolis. The City of Minneapolis has reviewed W42 and W49.

The preliminary wetland maps and wetland data forms were submitted on 6/22/15 in preparation for a site review of the wetland boundaries which took place on 6/29/15. Present at the site review were Ben Meyer with BWSR, Stacey Lijewski with Hennepin County, Melissa Jenny with the USACE, Adam Arvidson with the Minneapolis Park and Rec Board, Jeff Olson with SEH for the applicant, and Karen Wold with Barr for the City of Minneapolis, Bassett Creek WMC portion of Robbinsdale, and Golden Valley. Wetland edits were completed based on initial comments and a complete wetland delineation report was submitted on 12/11/15.

During a TEP meeting on 12/8/15, each LGU clarified that they would each retain jurisdiction for their portions of this project.

During the comment period, Karen Wold requested some minor wetland type revisions and wetland size designations. Based on these comments, SEH submitted a revised wetland summary table on 1/4/16, which was provided to the TEP on 1/5/16 and is also attached in this document. No other comments were received during the comment period.

The updated wetland summary table includes the following wetland types and sizes for wetlands within the City of Golden Valley jurisdiction:

Wetland ID	Field Verified Cowardin	Eggers & Reed Class.	Circ. 39 Class.	Basin Size (ac)
W37	PEM1A	Seas. flooded basin	Type 1	0.08
W38	PUBGx/PEMA	Open Water/wet (fresh) meadow	Type 5/2	3.08
W39	PUBGx	Open Water	Type 5	2.00
W40	PEM1A	Seas. flooded basin	Type 1	0.31
W41	PEM1A	Seas. flooded basin	Type 1	0.19
W46	PFO1A	Floodplain forest	Type 1	11.14
W47	PFO1A	Floodplain forest	Type 1	Part of W46
W50	PEM1A	Seas. flooded basin	Type 1	0.12

Note: Wetland Types per Circular 39 indicate the majority of wetland types within a delineated basin. Several other minor wetland types may also be present within the basin.

The wetland boundaries and updated wetland types were found to be accurate, based on the requirements of the 1987 USACE Wetland Delineation Manual, the 2010 Midwest Regional Supplement, and the 2015 Guidance for Submittal of Delineation Reports to the USACE and WCA LGU in Minnesota, Version 2.0. The City of Golden Valley approves the wetland boundaries and types.

For Replacement Plans using credits from the State Wetland Bank:

Bank Account #	Bank Service Area	County	Credits Approved for Withdrawal (sq. ft. or nearest .01 acre)

Replacement Plan Approval Conditions. In addition to any conditions specified by the LGU, the approval of a Wetland Replacement Plan is conditional upon the following:

☐ **Financial Assurance:** For project-specific replacement that is not in-advance, a financial assurance specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9 (List amount and type in LGU Findings).

☐ **Deed Recording:** For project-specific replacement, evidence must be provided to the LGU that the BWSR "Declaration of Restrictions and Covenants" and "Consent to Replacement Wetland" forms have been filed with the county recorder's office in which the replacement wetland is located.

☐ **Credit Withdrawal:** For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan.

Wetlands may not be impacted until all applicable conditions have been met!

LGU Authorized Signature:

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 5 provides notice that a decision was made by the LGU under the Wetland Conservation Act as specified above. If additional details on the decision exist, they have been provided to the landowner and are available from the LGU upon request.

Name	Title	
Jeff Oliver, PE	**City Engineer**	
Signature	Date	Phone Number and E-mail
	January 21, 2016	**763-593-8034** **joliver@goldenvalleymn.gov**

THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT. Additional approvals or permits from local, state, and federal agencies may be required. Check with all appropriate authorities before commencing work in or near wetlands.

Applicants proceed at their own risk if work authorized by this decision is started before the time period for appeal (30 days) has expired. If this decision is reversed or revised under appeal, the applicant may be responsible for restoring or replacing all wetland impacts.

This decision is valid for five years from the date of decision unless a longer period is advised by the TEP and specified in this notice of decision.

3. APPEAL OF THIS DECISION

Pursuant to MN Rule 8420.0905, any appeal of this decision can only be commenced by mailing a petition for appeal, including applicable fee, within thirty (30) calendar days of the date of the mailing of this Notice to the following as indicated:

Check one:

☒ Appeal of an LGU staff decision. Send petition and $500 fee (if applicable) to:	☐ Appeal of LGU governing body decision. Send petition and $500 filing fee to: Executive Director Minnesota Board of Water and Soil Resources 520 Lafayette Road North St. Paul, MN 55155

4. LIST OF ADDRESSEES

- ☒ SWCD TEP member: **Stacey Lijewski**
- ☒ BWSR TEP member: **Ben Meyer**
- ☒ LGU TEP member (if different than LGU Contact): **Karen Wold (Barr)**
- ☒ DNR TEP member: **Leslie Parris, Kate Drewry**
- ☐ DNR Regional Office (if different than DNR TEP member)
- ☒ City of Golden Valley: **Eric Eckman and Jeff Oliver**
- ☒ WD or WMO (if applicable): **Laura Jester (BCWMC)**
- ☒ Applicant and Landowner (if different) **agent Jeff Olson (SEH)**
- ☐ Members of the public who requested notice:

- ☒ Corps of Engineers Project Manager **Melissa Jenny**
- ☐ BWSR Wetland Bank Coordinator (wetland bank plan decisions only)

5. MAILING INFORMATION

➢For a list of BWSR TEP representatives: www.bwsr.state.mn.us/aboutbwsr/workareas/WCA_areas.pdf

➢For a list of DNR TEP representatives: www.bwsr.state.mn.us/wetlands/wca/DNR_TEP_contacts.pdf

➢Department of Natural Resources Regional Offices:

NW Region:	NE Region:	Central Region:	Southern Region:
Reg. Env. Assess. Ecol. Div. Ecol. Resources 2115 Birchmont Beach Rd. NE Bemidji, MN 56601	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1201 E. Hwy. 2 Grand Rapids, MN 55744	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1200 Warner Road St. Paul, MN 55106	Reg. Env. Assess. Ecol. Div. Ecol. Resources 261 Hwy. 15 South New Ulm, MN 56073

For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf

➢For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687

or send to:

US Army Corps of Engineers
St. Paul District, ATTN: OP-R
180 Fifth St. East, Suite 700
St. Paul, MN 55101-1678

➢For Wetland Bank Plan applications, also send a copy of the application to:

Minnesota Board of Water and Soil Resources
Wetland Bank Coordinator
520 Lafayette Road North
St. Paul, MN 55155

6. ATTACHMENTS

In addition to the site locator map, list any other attachments:

- ☒ **Updated wetland summary table**
- ☒ **Wetland delineation maps**
- ☐
- ☐
- ☐

Minnesota Wetland Conservation Act
Notice of Decision

Local Government Unit (LGU)	Address
City of Minneapolis	**309 S Second Ave Room 300** **Minneapolis, MN 55401**

1. PROJECT INFORMATION

Applicant Name	Project Name	Date of Application	Application Number
Metropolitan Council	**Blue Line Light Rail Extension (LRT)**	**12/11/15**	

☒ Attach site locator map.

Type of Decision:

☒ Wetland Boundary or Type ☐ No-Loss ☐ Exemption ☐ Sequencing
☐ Replacement Plan ☐ Banking Plan

2. LOCAL GOVERNMENT UNIT DECISION

Date of Decision: **1/22/16**

☒ Approved ☐ Approved with conditions (include below) ☐ Denied

LGU Findings and Conclusions (attach additional sheets as necessary):

On behalf of the Metropolitan Council, SEH Inc. submitted a wetland delineation for the Blue Line Light Rail Extension project located within Hennepin County in Brooklyn Park, Robbinsdale, Crystal, Golden Valley, and Minneapolis. The City of Minneapolis is the WCA LGU for the portion of the project within Minneapolis. Wetlands associated with this project within the City of Minneapolis are: W42, W48, and W49. Note that W42 and W49 straddle both Golden Valley and Minneapolis. The City of Minneapolis has reviewed W42 and W49.

The preliminary wetland maps and wetland data forms were submitted on 6/22/15 in preparation for a site review of the wetland boundaries which took place on 6/29/15. Present at the site review were Ben Meyer with BWSR, Stacey Lijewski with Hennepin County, Melissa Jenny with the USACE, Adam Arvidson with the Minneapolis Park and Rec Board, Jeff Olson with SEH for the applicant, and Karen Wold with Barr for the City of Minneapolis, Bassett Creek WMC portion of Robbinsdale, and Golden Valley. Wetland edits were completed based on initial comments and a complete wetland delineation report was submitted on 12/11/15.

During a TEP meeting on 12/8/15, each LGU clarified that they would each retain jurisdiction for their portions of this project.

During the comment period, Karen Wold requested some minor wetland type revisions and wetland size designations. Based on these comments, SEH submitted a revised wetland summary table on 1/4/16, which was provided to the TEP on 1/5/16 and is also attached in this document. No other comments were received during the comment period.

The updated wetland summary table includes the following wetland types and sizes for wetlands within the City of Minneapolis jurisdiction:

Wetland ID	Field Verified Cowardin	Eggers & Reed Class.	Circ. 39 Class.	Basin Size (ac.)
W42	PSS1A	Shrub Carr	Type 6	0.29
W48	R2UBGx	Riverine	Type 4	0.50
W49	PFO1A	Floodplain forest	Type 1	0.08

Note: Wetland Types per Circular 39 indicate the majority of wetland types within a delineated basin. Several other minor wetland types may also be present within the basin.

The wetland boundaries and updated wetland types were found to be accurate, based on the requirements of the 1987 USACE Wetland Delineation Manual, the 2010 Midwest Regional Supplement, and the 2015 Guidance for Submittal of Delineation Reports to the USACE and WCA LGU in Minnesota, Version 2.0. The City of Minneapolis approves the wetland boundaries and types.

For Replacement Plans using credits from the State Wetland Bank:

Bank Account #	Bank Service Area	County	Credits Approved for Withdrawal (sq. ft. or nearest .01 acre)

Replacement Plan Approval Conditions. In addition to any conditions specified by the LGU, the approval of a Wetland Replacement Plan is conditional upon the following:

☐ **Financial Assurance:** For project-specific replacement that is not in-advance, a financial assurance specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9 (List amount and type in LGU Findings).

☐ **Deed Recording:** For project-specific replacement, evidence must be provided to the LGU that the BWSR "Declaration of Restrictions and Covenants" and "Consent to Replacement Wetland" forms have been filed with the county recorder's office in which the replacement wetland is located.

☐ **Credit Withdrawal:** For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan.

Wetlands may not be impacted until all applicable conditions have been met!

LGU Authorized Signature:

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 5 provides notice that a decision was made by the LGU under the Wetland Conservation Act as specified above. If additional details on the decision exist, they have been provided to the landowner and are available from the LGU upon request.		
Name **Lois Eberhart**	Title **City of Minneapolis Water Resources Regulatory Administrator**	
Signature Lois E. Eberhart	Date **January 22, 2016**	Phone Number and E-mail **612-673-3260** **lois.eberhart@minneapolismn.gov**

THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT. Additional approvals or permits from local, state, and federal agencies may be required. Check with all appropriate authorities before commencing work in or near wetlands.

Applicants proceed at their own risk if work authorized by this decision is started before the time period for appeal (30 days) has expired. If this decision is reversed or revised under appeal, the applicant may be responsible for restoring or replacing all wetland impacts.

This decision is valid for three years from the date of decision unless a longer period is advised by the TEP and specified in this notice of decision.

3. APPEAL OF THIS DECISION

Pursuant to MN Rule 8420.0905, any appeal of this decision can only be commenced by mailing a petition for appeal, including applicable fee, within thirty (30) calendar days of the date of the mailing of this Notice to the following as indicated:

Check one:

☒ Appeal of an LGU staff decision. Send petition and $**0.00** fee to: Lois Eberhart, City of Minneapolis Water Resources Regulatory Administrator Public Works – Surface Water & Sewers Div. City of Lakes Building Room 300 309 S. Second Avenue Minneapolis MN 55401	☐ Appeal of LGU governing body decision. Send petition and $500 filing fee to: Executive Director Minnesota Board of Water and Soil Resources 520 Lafayette Road North St. Paul, MN 55155

4. LIST OF ADDRESSEES

☒ SWCD TEP member: **Stacey Lijewski**
☒ BWSR TEP member: **Ben Meyer**
☒ LGU TEP member (if different than LGU Contact): **Karen Wold (Barr)**
☒ DNR TEP member: **Leslie Parris, Kate Drewry**
☐ DNR Regional Office (if different than DNR TEP member)
☒ City of Minneapolis: **Lois Eberhart and Elizabeth Stout**
☒ WD or WMO (if applicable): **Laura Jester (BCWMC)**
☒ Applicant and Landowner (if different) **agent Jeff Olson (SEH)**
☐ Members of the public who requested notice:

☒ Corps of Engineers Project Manager **Melissa Jenny**
☐ BWSR Wetland Bank Coordinator (wetland bank plan decisions only)

5. MAILING INFORMATION

➢For a list of BWSR TEP representatives: www.bwsr.state.mn.us/aboutbwsr/workareas/WCA_areas.pdf

➢For a list of DNR TEP representatives: www.bwsr.state.mn.us/wetlands/wca/DNR_TEP_contacts.pdf

➢Department of Natural Resources Regional Offices:

NW Region:	NE Region:	Central Region:	Southern Region:
Reg. Env. Assess. Ecol. Div. Ecol. Resources 2115 Birchmont Beach Rd. NE Bemidji, MN 56601	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1201 E. Hwy. 2 Grand Rapids, MN 55744	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1200 Warner Road St. Paul, MN 55106	Reg. Env. Assess. Ecol. Div. Ecol. Resources 261 Hwy. 15 South New Ulm, MN 56073

For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf

➢For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687 or send to:

US Army Corps of Engineers

St. Paul District, ATTN: OP-R
180 Fifth St. East, Suite 700
St. Paul, MN 55101-1678

- For Wetland Bank Plan applications, also send a copy of the application to:
  Minnesota Board of Water and Soil Resources
  Wetland Bank Coordinator
  520 Lafayette Road North
  St. Paul, MN 55155

6. ATTACHMENTS

In addition to the site locator map, list any other attachments:

- ☒ **Updated wetland summary table**
- ☒ **Wetland delineation maps**
- ☐
- ☐
- ☐

Minnesota Wetland Conservation Act
Notice of Decision

Local Government Unit (LGU)	Address
Shingle Creek/West Mississippi WMC	**3235 Fernbrook Lane** **Plymouth, MN 55447**

1. PROJECT INFORMATION

Applicant Name	Project Name	Date of Application	Application Number
Metropolitan Council	**Blue Line LRT**	**10/28/2015** **(Decision period extended 12/22/2015**	

☒ Attach site locator map.

Type of Decision:

☒ Wetland Boundary or Type ☐ No-Loss ☐ Exemption ☐ Sequencing
☐ Replacement Plan ☐ Banking Plan

Technical Evaluation Panel Findings and Recommendation (if any):

☒ Approve ☐ Approve with conditions ☐ Deny

Summary (or attach):

2. LOCAL GOVERNMENT UNIT DECISION

Date of Decision: **2/10/2016**

☐ Approved ☒ Approved with conditions (include below) ☐ Denied

LGU Findings and Conclusions (attach additional sheets as necessary):

SEH submitted a wetland delineation report on behalf of the Metropolitan Council for the Blue Line LRT transportation project, located within the cities of Brooklyn Park, Crystal, Robbinsdale, Golden Valley, and Minneapolis. This Notice of Decision specifically addresses the portion of the project within Shingle Creek and West Mississippi Watersheds north of 36th Ave N in the Cities of Robbinsdale, Crystal, and Brooklyn Park. The Applicant is proposing to construct the Blue Line Light Rail Extension from the existing Target Field station to an end station in Brooklyn Park. The total project area consists of approximately 13 linear miles, of which this review addresses approximately 9 linear miles.

A wetland delineation report was completed by Jeff Olson of Short Elliot Hendrickson (SEH), Inc. on September 30, 2015. 39 wetlands (Wetlands 1-17, 26-30, 33-36, 44, 45, and 51) are located north of 36th Ave N and were identified within watershed boundaries and are included in this review. Wenck staff conducted a field review of wetland boundaries with BWSR and Army Corps staff on July 10, 2015 and the TEP was in agreement with the delineated boundaries and wetland types.

An additional TEP meeting was conducted December 8, 2015 to discuss the wetland delineation report findings. The TEP also discussed impacts to the Target North Campus mitigation wetland (Wetland 51), which was constructed in 2003 and is in permanent conservation easement. Note that the boundary of Wetland 51 was not delineated in the field and is not included in this decision.

The TEP requested that SEH revise the forested PFO wetland Eggers and Reed types from seasonally flooded basins to floodplain forest. SEH submitted a revised table summarizing the identified wetland types which is attached to this document (See "Revised Wetland Summary Table").

Shingle Creek and West Mississippi WMCs approve the boundaries as documented in the attached Revised Wetland Delineation Figures and the wetland types as summarized in the attached Revised Wetland Summary Table with the exception of Wetland 51 on the Target North Campus.

This decision is valid for five years.

For Replacement Plans using credits from the State Wetland Bank:

Bank Account #	Bank Service Area	County	Credits Approved for Withdrawal (sq. ft. or nearest .01 acre)

Replacement Plan Approval Conditions. In addition to any conditions specified by the LGU, the approval of a Wetland Replacement Plan is conditional upon the following:

☐ **Financial Assurance:** For project-specific replacement that is not in-advance, a financial assurance specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9 (List amount and type in LGU Findings).

☐ **Deed Recording:** For project-specific replacement, evidence must be provided to the LGU that the BWSR "Declaration of Restrictions and Covenants" and "Consent to Replacement Wetland" forms have been filed with the county recorder's office in which the replacement wetland is located.

☐ **Credit Withdrawal:** For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan.

Wetlands may not be impacted until all applicable conditions have been met!

LGU Authorized Signature:

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 5 provides notice that a decision was made by the LGU under the Wetland Conservation Act as specified above. If additional details on the decision exist, they have been provided to the landowner and are available from the LGU upon request.

Name	Title	
Wes Boll, Wenck Associates, Inc.	**WM WMC WCA Agent**	
Signature Wesley Boll	Date **2/10/2016**	Phone Number and E-mail **(763)479-4283** **wboll@wenck.com**

THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT. Additional approvals or permits from local, state, and federal agencies may be required. Check with all appropriate authorities before commencing work in or near wetlands.

Applicants proceed at their own risk if work authorized by this decision is started before the time period for appeal (30 days) has expired. If this decision is reversed or revised under appeal, the applicant may be responsible for restoring or replacing all wetland impacts.

This decision is valid for three years from the date of decision unless a longer period is advised by the TEP and specified in this notice of decision.

3. APPEAL OF THIS DECISION

Pursuant to MN Rule 8420.0905, any appeal of this decision can only be commenced by mailing a petition for appeal, including applicable fee, within thirty (30) calendar days of the date of the mailing of this Notice to the following as indicated:

Check one:

☒ Appeal of an LGU staff decision. Send petition and $_____ fee (if applicable) to: **Wes Boll** **Wenck Associates** **1800 Pioneer Creek Center** **Maple Plain, MN 55359**	☐ Appeal of LGU governing body decision. Send petition and $500 filing fee to: Executive Director Minnesota Board of Water and Soil Resources 520 Lafayette Road North St. Paul, MN 55155

4. LIST OF ADDRESSEES

☒ SWCD TEP member: **Stacey Lijewski – stacey.lijewski@co.hennepin.mn.us**
☒ BWSR TEP member: **Ben Meyer- ben.meyer@state.mn.us**
☒ LGU TEP member (if different than LGU Contact): **City of Brooklyn Park – Jesse Struve – jesse.struve@brooklynpark.org**
☐ DNR TEP member:
☒ DNR Regional Office (if different than DNR TEP member): **Leslie Parris - leslie.parris@state.mn.us**
☐ WD or WMO (if applicable):
☒ Applicant (notice only) and Landowner (if different): **Applicant: Met Council – bluelineext@metrotransit.org**
☒ Members of the public who requested notice (notice only):
Consultant: SEH, Inc. (Jeff Olson)-jolson@sehinc.com
☒ Corps of Engineers Project Manager (notice only): **Melissa Jenny – Melissa.m.jenny@usace.army.mil**
☐ BWSR Wetland Bank Coordinator (wetland bank plan applications only)

5. MAILING INFORMATION

- For a list of BWSR TEP representatives: www.bwsr.state.mn.us/aboutbwsr/workareas/WCA_areas.pdf
- For a list of DNR TEP representatives: www.bwsr.state.mn.us/wetlands/wca/DNR_TEP_contacts.pdf
- Department of Natural Resources Regional Offices:

NW Region:	NE Region:	Central Region:	Southern Region:
Reg. Env. Assess. Ecol. Div. Ecol. Resources 2115 Birchmont Beach Rd. NE Bemidji, MN 56601	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1201 E. Hwy. 2 Grand Rapids, MN 55744	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1200 Warner Road St. Paul, MN 55106	Reg. Env. Assess. Ecol. Div. Ecol. Resources 261 Hwy. 15 South New Ulm, MN 56073

For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf

- For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687 or send to:

US Army Corps of Engineers
St. Paul District, ATTN: OP-R

180 Fifth St. East, Suite 700
St. Paul, MN 55101-1678

- For Wetland Bank Plan applications, also send a copy of the application to:
  Minnesota Board of Water and Soil Resources
  Wetland Bank Coordinator
  520 Lafayette Road North
  St. Paul, MN 55155

6. ATTACHMENTS

In addition to the site locator map, list any other attachments:

- ☒ **Revised Wetland Delineation Figures**
- ☒ **Revised Wetland Summary Table**
- ☐
- ☐
- ☐

DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT, CORPS OF ENGINEERS
180 FIFTH STREET EAST, SUITE 700
ST. PAUL MINNESOTA 55101-1678

REPLY TO
ATTENTION

JUN 19 2013

Operations
Regulatory (2012-01051-MMJ)

Mr. Brent Rusco
Senior Professional Engineer
Hennepin County
Housing, Community Works & Transit
Engineering and Transit Planning
701 Fourth Avenue South, Suite 400
Minneapolis, MN 55415-1843

Dear Mr. Rusco:

We have reviewed the documents you recently provided regarding the Bottineau Transitway Project. As a cooperating agency in the preparation of the Environmental Impact Statement (EIS) for this project, this letter contains comments on Chapters 1 and 2 (1.16.13 version) of the Bottineau Transitway Preliminary Draft EIS (PDEIS). This letter is also intended to provide Corps concurrence with Points 1 (Purpose and Need) and 2 (Alternatives Carried Forward) for the Bottineau Transitway Project, as outlined in the National Environmental Policy Act (NEPA) / Section 404 Clean Water Act (404) merger process.

Chapter 1 of the PDEIS discusses the purpose and need for the Bottineau Transitway Project, and states: "The purpose of the Bottineau Transitway is to provide transit service which will satisfy the long-term regional mobility and accessibility needs for businesses and the traveling public." The project need is described as: "the Bottineau Transitway project is needed to effectively address long-term regional transit mobility and local accessibility needs while providing efficient, travel-time competitive transit service that supports economic development goals and objectives of local, regional, and statewide plans.

The Corps concurs with the abovementioned purpose and need statements for use in Bottineau Transitway Project NEPA documentation. Chapter 1 has also provided us with sufficient information to determine the overall project purpose for the Bottineau Transitway Project. As described in the 404(b)(1) Guidelines (Guidelines) of the Clean Water Act, the overall project purpose is what the Corps uses to direct the range of reasonable alternatives to be considered in our 404 permit application review process. We suggest the following overall project purpose, which also includes a more defined geographic boundary: "to provide high-capacity, competitive transit service within the Bottineau Transitway study area."

Our suggested overall project purpose coincides with the transit alternatives that were considered and advanced for further study in the Bottineau Transitway Alternatives Analysis Study Final Report (AA Study), as described in Chapter 2 of the PDEIS. Therefore, the Corps concurs with the array of

alternatives considered for this project, as well as the alternatives that were carried forward for further review, as described below.

The AA Study considered a wide range of transit modes and alignments within the Bottineau Transitway study area. The study progressively narrowed the transitway build alternatives to a set of 21 alternatives (9 light rail transit (LRT) and 12 bus rapid transit (BRT) alignments) to be studied in more detail. Those alternatives were then evaluated against a set of defined goals and evaluating criteria, and 4 LRT alternatives (A-C-D1, B-C-D1, A-C-D2, & B-C-D2), and 1 BRT alternative (B-C-D1) were carried forward for consideration as the Locally Preferred Alternative (LPA). After additional evaluation of the remaining alternatives, the Draft EIS for the Bottineau Transitway Project will be recommending LRT alternative B-C-D1 as the LPA.

To comply with the Guidelines, the alternatives analysis must consider ways to avoid and minimize impacts to waters of the U.S. (WOUS) so that the least environmentally-damaging practicable alternative (LEDPA) can be identified. The Guidelines specifically require that "no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences" (40 CFR § 230.10(a)). Per the Guidelines, a practicable alternative is defined as available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose. Time and money spent on the proposal prior to applying for a Section 404 permit cannot be factored into the Corps decision regarding whether a less damaging practicable alternative is available.

We have reviewed the draft Water Resources Technical Report prepared for the Bottineau Transitway Project, as well as the technical memorandums, dated May 7, 2012, specifically comparing Alignments A versus B, and Alignments D1 versus D2. Following is a summary of estimated impacts to WOUS that would result from the alignments currently being considered for this project: Alignment A - 1.8 acres of wetland impact, Alignment B - 5.9 acres of wetland impact, Alignment C - 0.7 acre of wetland impact, Alignment D1 - 6.1 acres of wetland impact, and Alignment D2 - 0.7 acre of wetland impact. Alignment C is a common segment to all alternatives. As described, Alternative A-C-D2 would result in the least amount of impacts to WOUS.

You have provided sufficient information describing the limiting factors associated with Alignment D2, and we agree with the selection of Alignment D1 as a portion of the LPA. However, we currently do not have enough information to make a determination regarding Alignments A versus B, mainly because the location of the Operations and Maintenance Facility (OMF) at the northern end of Alternative B has yet to be determined, and the aquatic impacts associated with the alternate locations vary considerably.

Without knowing the final location or the potential impacts to WOUS associated with the OMF, we cannot determine if the entire LPA (B-C-D1) would qualify as the LEDPA, as defined in the Guidelines. Therefore, we are currently unable to comment on concurrence point 3 of the NEPA/404 merger process.

The burden of proof to demonstrate compliance with the Guidelines rests with the applicant; where insufficient information is provided to determine compliance, the Guidelines require that no

permit be issued. If you plan to move forward with Alternative B-C-D1 as the LPA, please submit additional information to support your decision to eliminate Alignment A from consideration.

Thank you for the opportunity to comment on Chapters 1 and 2 of the Bottineau Transitway Preliminary Draft EIS. We are committed to continuing coordination with you and the local Bottineau Transitway project team on concurrence point 3 of the NEPA/404 merger process, through technical review of the DEIS chapters, and through evaluation of impact avoidance measures. For further information, please contact Melissa Jenny, the Corps project manager for Hennepin County, at 651-290-5363 or Melissa.m.jenny@usace.army.mil.

Sincerely,

for Tamara E. Cameron
Chief, Regulatory Branch

Copy furnished:
Maya Sarna, Federal Transit Authority
Kathryn O'Brien, Metro Transit
Joseph Gladke, Hennepin County Regional Rail Authority
Jeanne Witzig, Kimley-Horne
Beth Kunkle, Kimley-Horne

DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT, CORPS OF ENGINEERS
180 FIFTH STREET EAST, SUITE 700
ST. PAUL MINNESOTA 55101-1678

OCT 01 2013

REPLY TO
ATTENTION

Operations
Regulatory (2012-01051-MMJ)

Mr. Brent Rusco
Senior Professional Engineer
Hennepin County
Housing, Community Works & Transit
Engineering and Transit Planning
701 Fourth Avenue South, Suite 400
Minneapolis, MN 55415-1843

Dear Mr. Rusco:

We have reviewed the documents you provided in response to our request for additional information regarding the Bottineau Transitway Project. After reviewing this additional information we can now concur with Point 3 (Identification of the Selected Alternative) for the Bottineau Transitway Project, as outlined in the National Environmental Policy Act (NEPA) / Section 404 Clean Water Act (404) merger process.

As stated in our earlier letter, to comply with our 404(b)(1) Guidelines (Guidelines), the alternatives analysis for the Bottineau Transitway must consider ways to avoid and minimize impacts to waters of the U.S. (WOUS) so that the least environmentally damaging practicable alternative (LEDPA) can be identified. Per the Guidelines, a practicable alternative is defined as available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose.

Numerous alignment configurations or alternatives were considered for this project. After reviewing the preliminary wetland impact calculations completed for each alignment, we determined that project alternative A-C-D2 would result in the least amount of impact to WOUS. However, the Locally Preferred Alternative (LPA) for the Bottineau Transitway Project is alternative B-C-D1. At the time of our last letter, you had provided enough information for us to determine that alignment D2 is not a practicable alternative for this project, and we agreed that alignment D1 would be acceptable as part of the LEDPA. You have now provided sufficient information to demonstrate that alignment A is also not a practicable alternative. Therefore, we have made a preliminary determination that the selected alternative B-C-D1 is the LEDPA.

As is typical of a NEPA/404 merger process, if substantial new information regarding alternative B-C-D1 is brought forward later in the project development process, we may revisit this decision and our concurrence that the selected alternative is the LEDPA. In addition, we anticipate further opportunity for avoidance and minimization of impacts to WOUS as the LPA is further refined during the design phase.

We look forward to reviewing the Draft EIS for this project. For further information, please contact Melissa Jenny, the Corps project manager for Hennepin County, at 651-290-5363 or Melissa.m.jenny@usace.army.mil.

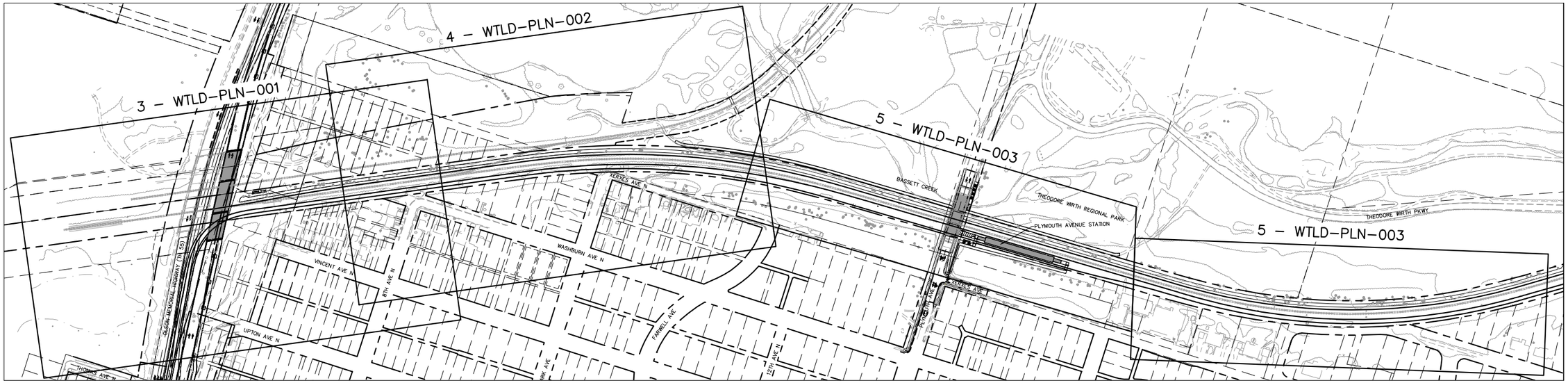
Sincerely,

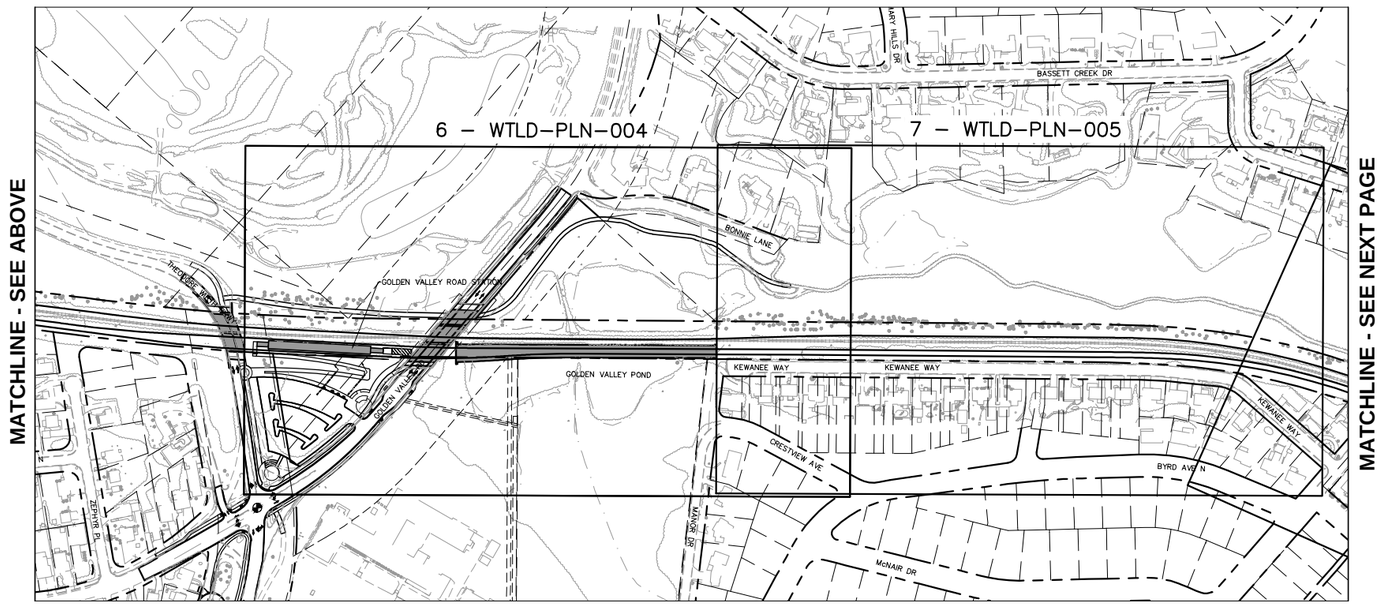
Tamara E. Cameron
Chief, Regulatory Branch

Copy furnished:
Maya Sarna, Federal Transit Authority
Kathryn O'Brien, Metro Transit
Joseph Gladke, Hennepin County Regional Rail Authority
Jeanne Witzig, Kimley-Horne
Beth Kunkle, Kimley-Horne

Appendix B

Proposed BLRT Extension Project Planset (Planview and Cross-Sections) Depicting Impacts to Wetlands and Aquatic Resources





DRAFT-WORK IN PROCESS

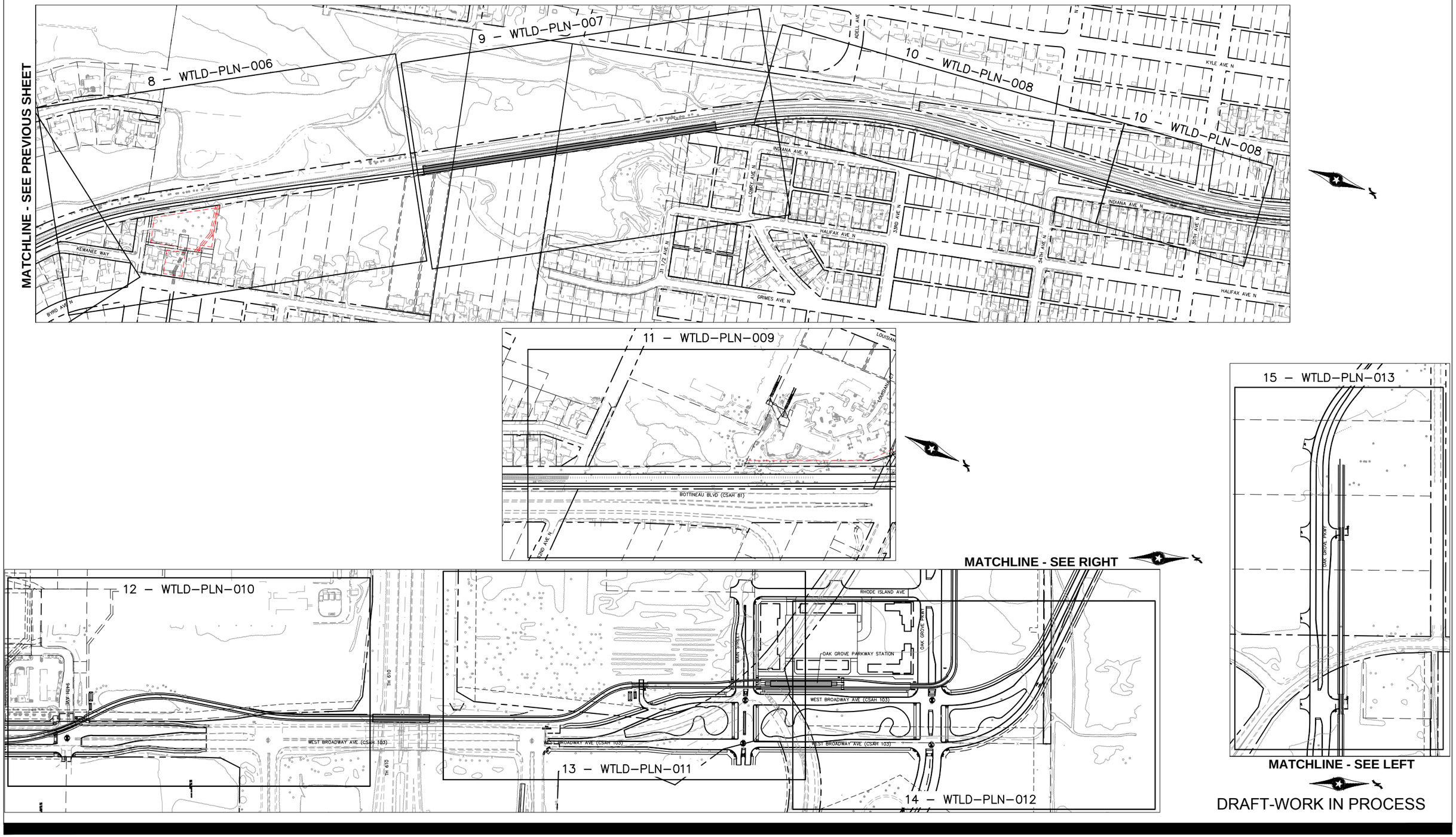
BLUE LINE LRT EXTENSION

SECTION 404
WETLAND IMPACTS - INDEX

0 100 200 400

DATE:
5/6/2016

1
30



BLUE LINE LRT EXTENSION

SECTION 404
WETLAND IMPACTS - INDEX

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DATE:
5/6/2016

2
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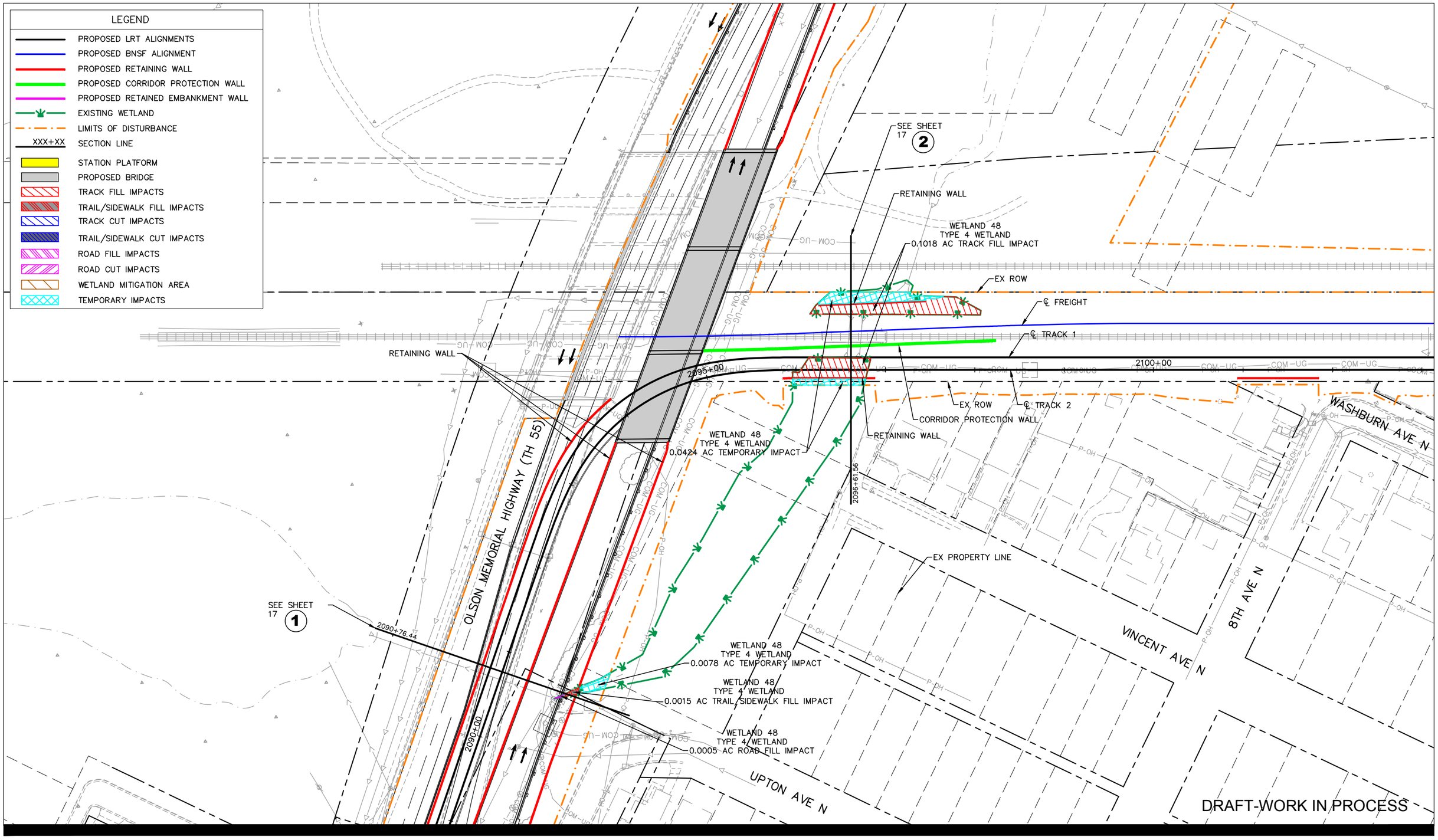


May, 10 2016 05:26 pm H:\BPO\550_Design_Consultant\CAD\000-OVERALL\PE\EXHIBITS\CIVIL\404WetlandPlans\0-WetlandPlansheetsXSections-RailSouth.dwg By: V-HuynhMC

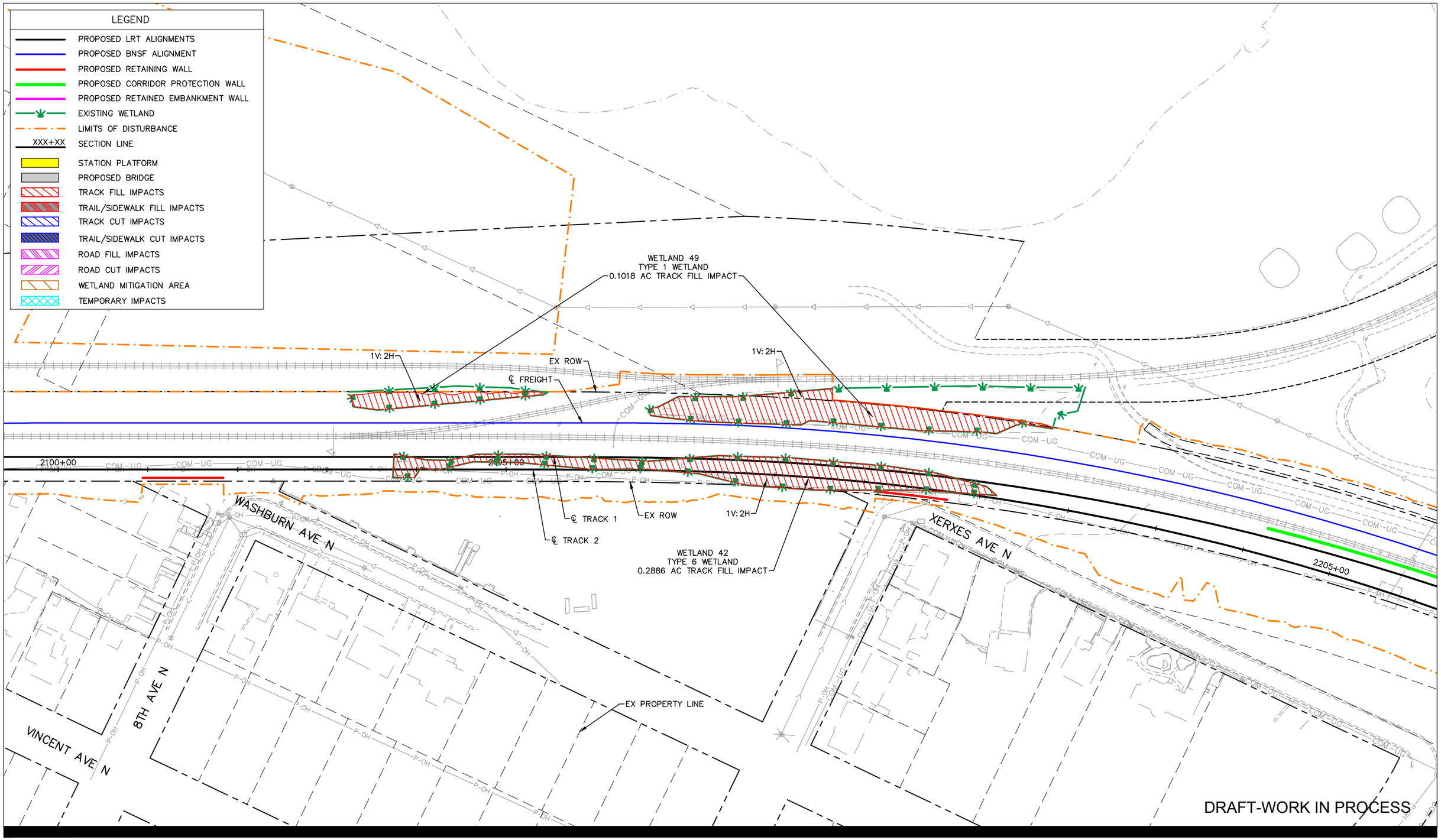
BLUE LINE LRT EXTENSION

SECTION 404

WETLAND IMPACTS - PLAN VIEW

0 25 50 100

DATE: 5/10/2016



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BLUE LINE LRT EXTENSION

SECTION 404

WETLAND IMPACTS - PLAN VIEW

0 25 50 100

DATE: 5/10/2016

THEODORE WIRTH REGIONAL PARK

BASSETT CREEK
(MnDNR PUBLIC WATERCOURSE)

MnDNR PUBLIC WATER 651P

WETLAND 46
TYPE 1 WETLAND
0.0633 AC TRAIL CUT IMPACT

WETLAND 46
TYPE 1 WETLAND
0.1071 AC WETLAND MITIGATION AREA

WETLAND 46
RIVERINE WETLAND TYPE
±450 LF OF IMPACT

WETLAND 46
TYPE 1 WETLAND
0.2984 AC TRAIL FILL IMPACT

WETLAND 46
TYPE 1 WETLAND
0.0008 AC TEMPORARY IMPACT

CORRIDOR PROTECTION/
RETAINED EMBANKMENT

RETAINING WALL

℄ FREIGHT

1V: 3H

EX ROW

PLYMOUTH AVENUE STATION

2210+00

2215+00

2220+00

WETLAND 46
TYPE 1 WETLAND
0.6815 AC TOTAL TRACK FILL IMPACT
(SEE BELOW FOR CONTINUATION OF WETLAND)

CORRIDOR PROTECTION WALL

℄ TRACK 1

℄ TRACK 2

WETLAND 41
TYPE 1 WETLAND
0.1917 AC TRACK FILL

EX PROPERTY LINE

PLYMOUTH AVE N

SEE SHEET 18
3
2209+75.53

SEE SHEET 18
4
2213+41.79

MATCH LINE - SEE BELOW

MATCH LINE - SEE ABOVE

CORRIDOR PROTECTION WALL

1V: 2H

WETLAND 46
TYPE 1 WETLAND
0.6815 AC TOTAL TRACK FILL IMPACT
(SEE ABOVE FOR CONTINUATION OF WETLAND)

℄ FREIGHT

EX ROW

2225+00

2230+00

2235+00

WETLAND 50
TYPE 1 WETLAND
0.1176 AC TRACK FILL IMPACT

WETLAND 40
TYPE 1 WETLAND
0.0121 AC TRACK CUT IMPACT

EX PROPERTY LINE

WETLAND 40
TYPE 1 WETLAND
0.3006 AC TRACK FILL IMPACT

SEE SHEET 19
5
2225+72.06

SEE SHEET 19
6
2227+80.72

SEE SHEET 20
7
2234+15.20

XERXES AVE

YORK AVE

DRAFT-WORK IN PROCESS

LEGEND

- PROPOSED LRT ALIGNMENTS
- PROPOSED BNSF ALIGNMENT
- PROPOSED RETAINING WALL
- PROPOSED CORRIDOR PROTECTION WALL
- PROPOSED RETAINED EMBANKMENT WALL
- EXISTING WETLAND
- LIMITS OF DISTURBANCE
- XXX+XX SECTION LINE
- STATION PLATFORM
- PROPOSED BRIDGE
- TRACK FILL IMPACTS
- TRAIL/SIDEWALK FILL IMPACTS
- TRACK CUT IMPACTS
- TRAIL/SIDEWALK CUT IMPACTS
- ROAD FILL IMPACTS
- ROAD CUT IMPACTS
- WETLAND MITIGATION AREA
- TEMPORARY IMPACTS

BLUE LINE LRT EXTENSION

SECTION 404
WETLAND IMPACTS - PLAN VIEW

0 25 50 100

DATE:
5/10/2016

5
30

LEGEND

- PROPOSED LRT ALIGNMENTS
- PROPOSED BNSF ALIGNMENT
- PROPOSED RETAINING WALL
- PROPOSED CORRIDOR PROTECTION WALL
- PROPOSED RETAINED EMBANKMENT WALL
- EXISTING WETLAND
- LIMITS OF DISTURBANCE
- XXX+XX SECTION LINE
- STATION PLATFORM
- PROPOSED BRIDGE
- TRACK FILL IMPACTS
- TRAIL/SIDEWALK FILL IMPACTS
- TRACK CUT IMPACTS
- TRAIL/SIDEWALK CUT IMPACTS
- ROAD FILL IMPACTS
- ROAD CUT IMPACTS
- WETLAND MITIGATION AREA
- TEMPORARY IMPACTS

RETAINING WALL

CORRIDOR PROTECTION/
RETAINED EMBANKMENT

RETAINING WALL

CORRIDOR PROTECTION WALL

WETLAND 38
TYPE 5/ TYPE 2 WETLAND
0.0000 AC IMPACTS

SEE SHEET 21
9 10

EX ROW

℄ FREIGHT

PROP BRIDGE

EX ROW

CORRIDOR PROTECTION WALL

BONNIE LANE

GOLDEN VALLEY ROAD STATION

245+00

2250+00

2255+00

2260+00

GOLDEN VALLEY RD

WETLAND 39
TYPE 5 WETLAND
0.3980 AC TRACK FILL IMPACT

*NOTE: TRACK FILL IMPACT REPRESENTS ACREAGE OF BRIDGE DECK, MAY BE REDUCED LATER WHEN BRIDGE PIER LOCATIONS ARE FINALIZED

GOLDEN VALLEY POND

2254+39.56

℄ TRACK 1

℄ TRACK 2

TEMPORARY ACCESS
FACILTY

EX ROW

KEWANEE WAY

EX ROW

SOUTH GOLDEN
VALLEY POND

SEE SHEET 20
8

WETLAND 39
TYPE 5 WETLAND
0.6505 AC TEMPORARY IMPACT

WETLAND 39
TYPE 5 WETLAND
0.0025 AC TRACK CUT IMPACT

WETLAND 39
TYPE 2 WETLAND
0.0916 AC WETLAND MITIGATION AREA

CRESTVIEW AVE

DRAFT-WORK IN PROCESS

May, 10 2016 05:27 pm H:\BPO\550_Design_Consultant\CAD\000-OVERALL\PE\EXHIBITS\CIVIL\404WetlandPlans\404WetlandPlansheetsXSections-RailSouth.dwg By: V-HuynhMC

METRO BLUE LINE EXTENSION Bottineau LRT

METROPOLITAN COUNCIL

Kimley»Horn

BLUE LINE LRT EXTENSION

SECTION 404

WETLAND IMPACTS - PLAN VIEW

0 25 50 100

DATE:
5/10/2016

6
30

LEGEND

- PROPOSED LRT ALIGNMENTS
- PROPOSED BNSF ALIGNMENT
- PROPOSED RETAINING WALL
- PROPOSED CORRIDOR PROTECTION WALL
- PROPOSED RETAINED EMBANKMENT WALL
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- TRAIL/SIDEWALK FILL IMPACTS
- TRACK CUT IMPACTS
- TRAIL/SIDEWALK CUT IMPACTS
- ROAD FILL IMPACTS
- ROAD CUT IMPACTS
- WETLAND MITIGATION AREA
- TEMPORARY IMPACTS

EX ROW
CORRIDOR PROTECTION WALL
℄ FREIGHT
WETLAND 37
TYPE 1 WETLAND
0.0755 AC TRACK FILL IMPACT
CORRIDOR PROTECTION WALL
CORRIDOR PROTECTION/
RETAINED EMBANKMENT
2260+00
2265+00
2270+00
KEWANEE WAY
EX ROW
RETAINING WALL
KEWANEE WAY
℄ TRACK 2
℄ TRACK 1
RETAINING WALL
CRESTVIEW AVE
EX PROPERTY LINE
BYRD AVE N
DRAFT-WORK IN PROCESS

BLUE LINE LRT EXTENSION

SECTION 404
WETLAND IMPACTS - PLAN VIEW

0 25 50 100

DATE:
5/10/2016

LEGEND

- PROPOSED LRT ALIGNMENTS
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- PROPOSED RETAINED EMBANKMENT WALL
- EXISTING WETLAND
- LIMITS OF DISTURBANCE
- XXX+XX SECTION LINE
- STATION PLATFORM
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- TRACK FILL IMPACTS
- TRAIL/SIDEWALK FILL IMPACTS
- TRACK CUT IMPACTS
- TRAIL/SIDEWALK CUT IMPACTS
- ROAD FILL IMPACTS
- ROAD CUT IMPACTS
- WETLAND MITIGATION AREA
- TEMPORARY IMPACTS

MnDNR PUBLIC WATER WETLAND 645W

WETLAND 34
TYPE 4 WETLAND
0.000 AC IMPACTS

MnDNR PUBLIC WATER WETLAND 644W

WETLAND 35
TYPE 1 WETLAND
0.0394 AC TRACK CUT IMPACT
(STORM VOLUME COMPENSATION)

WETLAND 35
TYPE 1 WETLAND
0.3639 AC TRACK FILL IMPACT

℄ TRACK 2
℄ TRACK 1
℄ FREIGHT
EX ROW
1V: 2H
1V: 26H
NORTH WETLAND 35
SEE SHEET 23
12
WETLAND 35
TYPE 1 WETLAND
0.0423 AC WETLAND MITIGATION AREA
CORRIDOR PROTECTION WALL
COM – UG
P-OH
2275+00
2305+00
2310+00
EX ROW
CORRIDOR PROTECTION WALL
1V: 2H
2306+58.18
WETLAND 36
TYPE 6 WETLAND
0.2124 AC TRACK FILL IMPACT
SEE SHEET 22
11
EX PROPERTY LINE

DRAFT-WORK IN PROCESS

May, 10 2016 05:28 pm H:\BPO\550_Design_Consultant\CAD\000-OVERALL\PE\EXHIBITS\CIVIL\404WetlandPlans\0-WetlandPlansheetsXSections-RailSouth.dwg By: V-HuynhMC

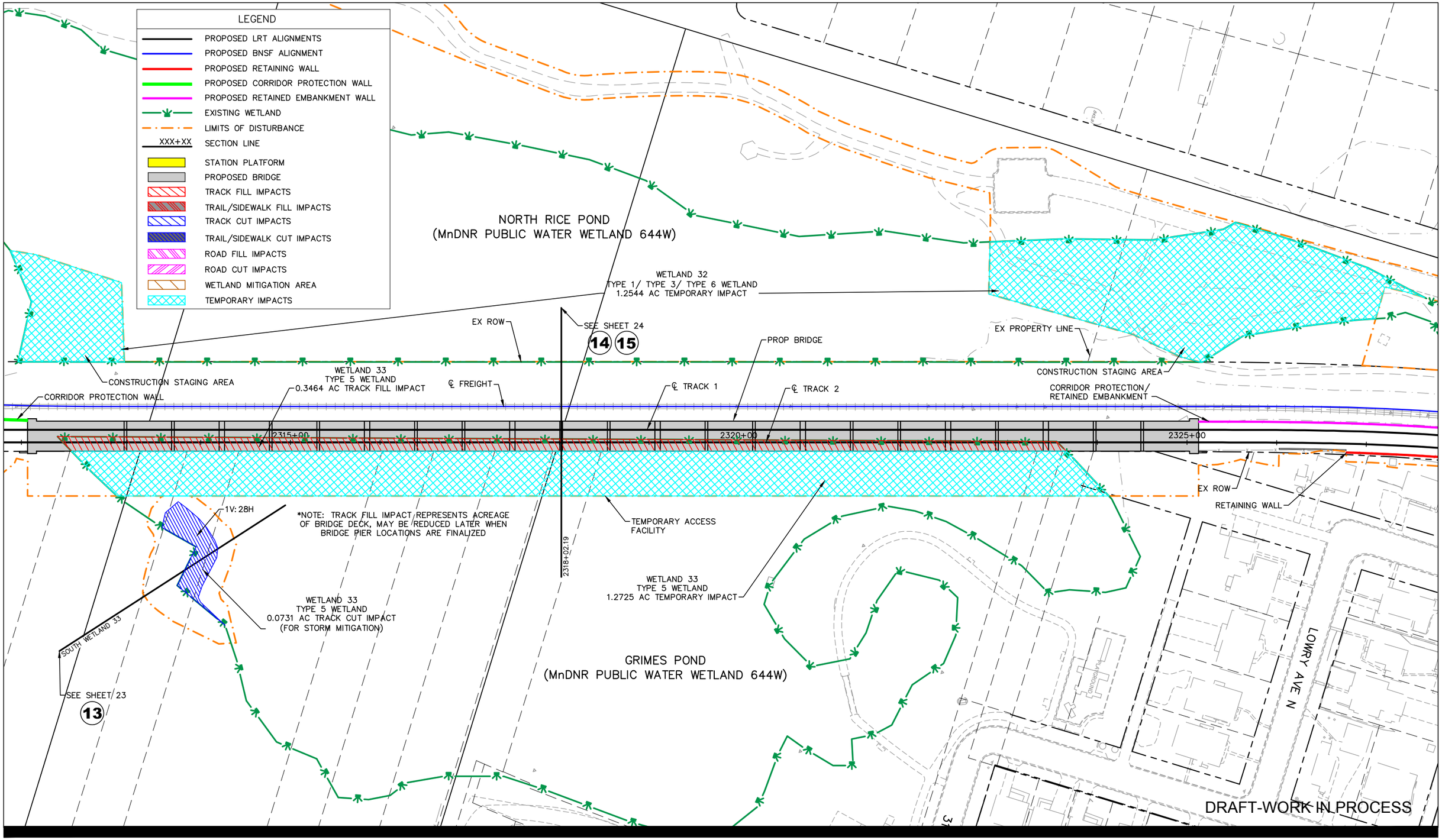
BLUE LINE LRT EXTENSION

SECTION 404
WETLAND IMPACTS - PLAN VIEW

0 25 50 100

DATE:
5/10/2016

8
30



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BLUE LINE LRT EXTENSION

SECTION 404
WETLAND IMPACTS - PLAN VIEW

0 25 50 100

DATE:
5/10/2016

9
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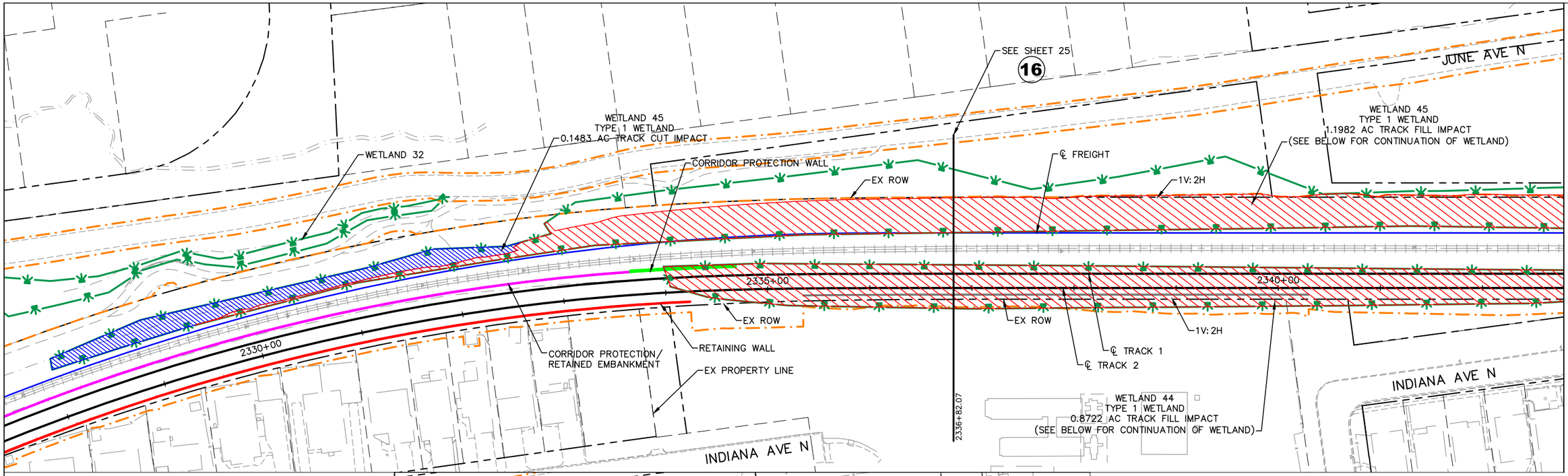

LEGEND

- PROPOSED LRT ALIGNMENTS
- PROPOSED BNSF ALIGNMENT
- PROPOSED RETAINING WALL
- PROPOSED CORRIDOR PROTECTION WALL
- PROPOSED RETAINED EMBANKMENT WALL
- EXISTING WETLAND
- LIMITS OF DISTURBANCE
- XXX+XX SECTION LINE
- STATION PLATFORM
- PROPOSED BRIDGE
- TRACK FILL IMPACTS
- TRAIL/SIDEWALK FILL IMPACTS
- TRACK CUT IMPACTS
- TRAIL/SIDEWALK CUT IMPACTS
- ROAD FILL IMPACTS
- ROAD CUT IMPACTS
- WETLAND MITIGATION AREA
- TEMPORARY IMPACTS

DRAFT-WORK IN PROCESS

BLUE LINE LRT EXTENSION

SECTION 404

WETLAND IMPACTS - PLAN VIEW

0 25 50 100

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LEGEND

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- PROPOSED BNSF ALIGNMENT
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- TRACK CUT IMPACTS
- TRAIL/SIDEWALK CUT IMPACTS
- ROAD FILL IMPACTS
- ROAD CUT IMPACTS
- WETLAND MITIGATION AREA
- TEMPORARY IMPACTS

WETLAND 28
TYPE 1 WETLAND
0.1482 AC TRACK CUT IMPACT

WETLAND 28
TYPE 2 WETLAND
0.5871 WETLAND MITIGATION AREA

WETLAND 28
TYPE 1 WETLAND
0.2821 AC TRACK FILL IMPACT

1V: 3H

1V: 3H

1V: 2H

NORTH WETLAND 28

EX PROPERTY LINE

SEE SHEET 26
19

LOUISIANA CT

EX ROW

℄ FREIGHT

℄ TRACK 2

℄ TRACK 1

EX ROW

2700+00

2705+00

2710+00

2705+53.75

BOTTINEAU BLVD (CSAH 81)

SEE SHEET 26
18

62ND AVE N

63RD AVE N

DRAFT-WORK IN PROCESS

BLUE LINE LRT EXTENSION

SECTION 404
WETLAND IMPACTS - PLAN VIEW

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LEGEND

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- TRACK CUT IMPACTS
- TRAIL/SIDEWALK CUT IMPACTS
- ROAD FILL IMPACTS
- ROAD CUT IMPACTS
- WETLAND MITIGATION AREA
- TEMPORARY IMPACTS

WETLAND 16
TYPE 1 WETLAND
0.7497 AC TRACK FILL IMPACT

WETLAND 16
TYPE 1 WETLAND
0.0697 AC TRAIL/SIDEWALK FILL IMPACT

WETLAND 17
TYPE 1 WETLAND
0.0000 AC IMPACTS

2930+00

2935+00

2940+00

998+55 999+00

898+78 899+00

DRAFT-WORK IN PROCESS

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BLUE LINE LRT EXTENSION

SECTION 404
WETLAND IMPACTS - PLAN VIEW

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30

PROPOSED BNSF ALIGNMENT
PROPOSED RETAINING WALL
PROPOSED CORRIDOR PROTECTION WALL
PROPOSED RETAINED EMBANKMENT WALL
EXISTING WETLAND
LIMITS OF DISTURBANCE
XXX+XX SECTION LINE
STATION PLATFORM
PROPOSED BRIDGE
TRACK FILL IMPACTS
TRAIL/SIDEWALK FILL IMPACTS
TRACK CUT IMPACTS
TRAIL/SIDEWALK CUT IMPACTS
ROAD FILL IMPACTS
ROAD CUT IMPACTS
WETLAND MITIGATION AREA
TEMPORARY IMPACTS

EX PROPERTY LINE

WETLAND 13
TYPE 1 WETLAND
0.0912 AC TRAIL/SIDEWALK FILL IMPACT

PC: 44+05.38
PRC: 44+66.46

WETLAND 13
TYPE 1 WETLAND
0.4421 AC ROAD FILL IMPACT

℄ 99TH AVE N (EB)
℄ 99TH AVE N (WB)
PT: 45+27.94
99TH AVE N

SEE SHEET 28
22
43+90.00
1V:4H

WETLAND 14
TYPE 4 WETLAND
0.0242 AC TRAIL/SIDEWALK FILL IMPACT

PC: 50+78.79
WETLAND 14
TYPE 4 WETLAND
0.5816 AC ROAD FILL IMPACT

OAK GROVE PARKW

DRAFT-WORK IN PROCESS

BLUE LINE LRT EXTENSION

SECTION 404
WETLAND IMPACTS - PLAN VIEW

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LEGEND

- PROPOSED LRT ALIGNMENTS
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- PROPOSED RETAINING WALL
- PROPOSED CORRIDOR PROTECTION WALL
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- TRACK CUT IMPACTS
- TRAIL/SIDEWALK CUT IMPACTS
- ROAD FILL IMPACTS
- ROAD CUT IMPACTS
- WETLAND MITIGATION AREA
- TEMPORARY IMPACTS

VE PARKWAY STATION

OAK GROVE PKWY

WEST BROADWAY AVE N

WETLAND 7
TYPE 1 WETLAND
0.0862 AC TRAIL/SIDEWALK FILL IMPACT

WETLAND 7
TYPE 1 WETLAND
0.2007 AC ROAD FILL IMPACT

1V: 4H

SEE SHEET 29
24

WETLAND 6
TYPE 1 WETLAND
0.0000 AC IMPACTS

℄ CSAH 103 (SB)

℄ CSAH 103 (NB)

SEE SHEET 27
20

1V: 4H

WETLAND 4
TYPE 1 WETLAND
0.1357 AC ROAD FILL IMPACT

WETLAND 12
TYPE 1 WETLAND
0.0332 AC ROAD CUT IMPACT

WETLAND 12
TYPE 1 WETLAND
0.0233 AC ROAD FILL IMPACT

WETLAND 51
TYPE 1 WETLAND
0.0984 AC ROAD FILL IMPACT

1V: 3H

℄ CSAH 103 (SB)

WETLAND 51
TYPE 1 WETLAND
0.1111 AC TRAIL/SIDEWALK FILL IMPACT

SEE SHEET 28
23

SEE SHEET 27
21

1V: 4H

WETLAND 2
TYPE 1 WETLAND
0.0000 AC IMPACTS

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BLUE LINE LRT EXTENSION

SECTION 404
WETLAND IMPACTS - PLAN VIEW

0 25 50 100

DATE:
5/11/2016

14
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LEGEND

- PROPOSED LRT ALIGNMENTS
- PROPOSED BNSF ALIGNMENT
- PROPOSED RETAINING WALL
- PROPOSED CORRIDOR PROTECTION WALL
- PROPOSED RETAINED EMBANKMENT WALL
- EXISTING WETLAND
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- TRACK CUT IMPACTS
- TRAIL/SIDEWALK CUT IMPACTS
- ROAD FILL IMPACTS
- ROAD CUT IMPACTS
- WETLAND MITIGATION AREA
- TEMPORARY IMPACTS

EX ROW

EX ROW

EX PROPERTY LINE

EX PROPERTY LINE

SEE SHEET 30 26

SEE SHEET 29 25

℄ OAK GROVE PKWY WB

2986+88

2985+00

2980+00

2975+00

19+00

20+00

21+00

22+00

23+00

24+00

25+00

26+00

27+00

28+00

29+00

30+00

31+00

32+00

33+00

34+00

35+00

R=500.00'

R=545.00'

31+44.35

33+45.00

OAK GROVE PKWY

℄ OAK GROVE PKWY EB

1V: 4H

1V: 4H

WETLAND 9
TYPE 1 WETLAND
0.0012 AC TRAIL/SIDEWALK FILL IMPACT

WETLAND 10
TYPE 1 WETLAND
0.0000 AC IMPACTS

WETLAND 11
TYPE 1 WETLAND
0.0000 AC IMPACT

WETLAND 8
TYPE 1 WETLAND
0.0254 AC TRAIL/SIDEWALK FILL IMPACT

EX ROW

DRAFT-WORK IN PROCESS

May, 10 2016 05:38 pm H:\BPO\550_Design_Consultant\CAD\000-OVERALL\PE\EXHIBITS\CIVIL\404WetlandPlans\0-WetlandPlansheets-BP.dwg By: V-HuynhMC

BLUE LINE LRT EXTENSION

SECTION 404
WETLAND IMPACTS - PLAN VIEW

0 25 50 100

DATE:
5/10/2016

15
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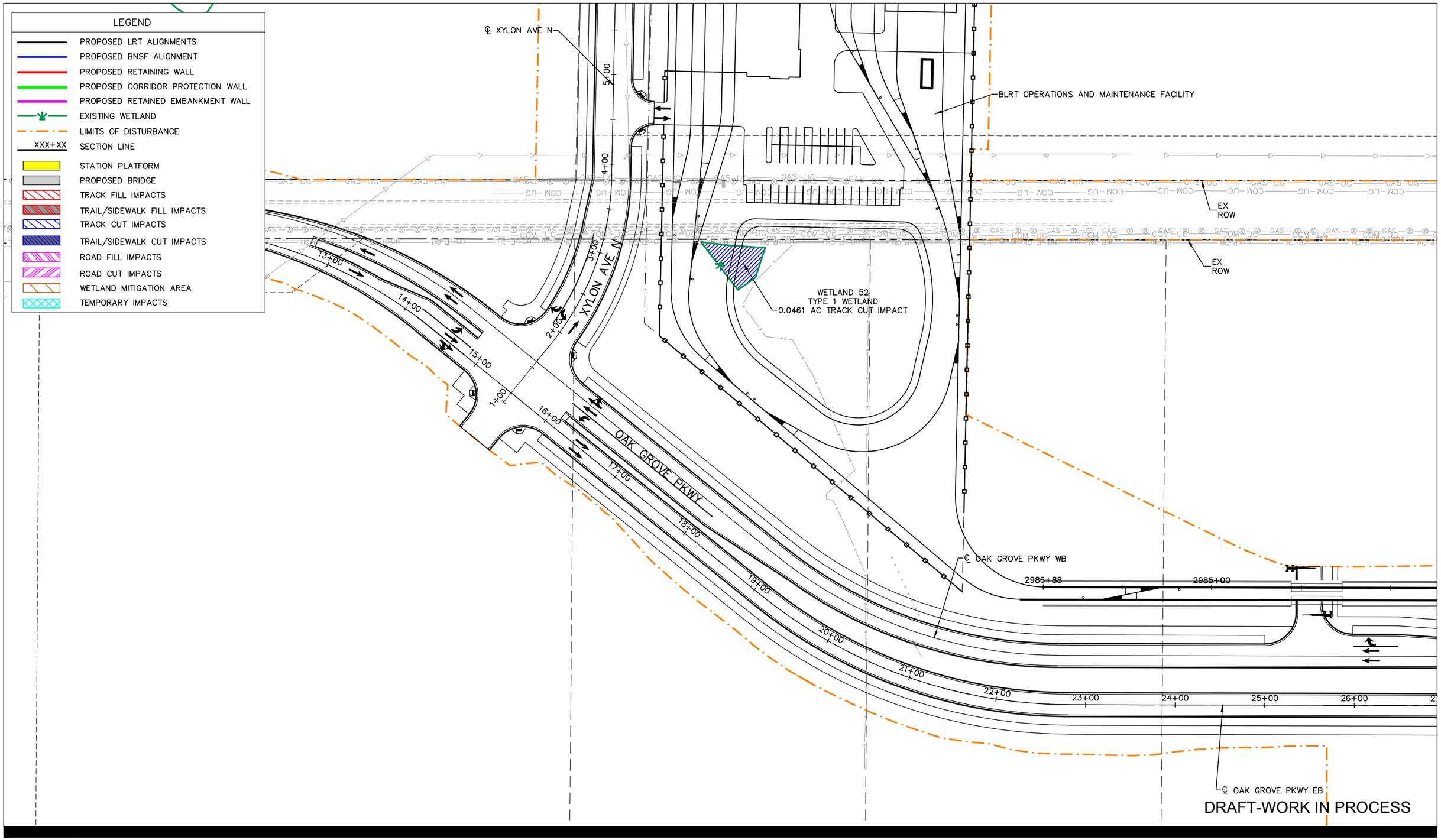

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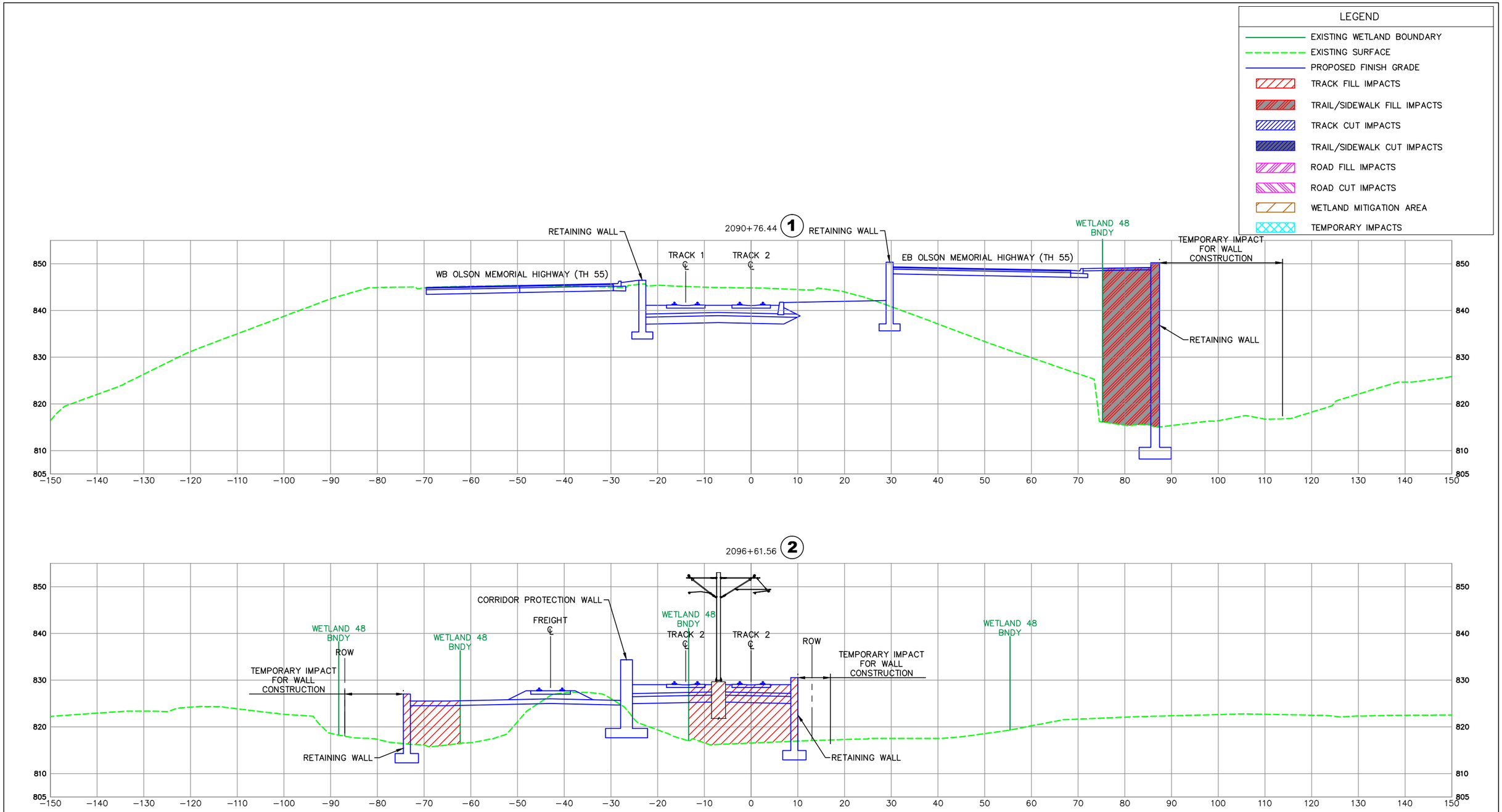
BLUE LINE LRT EXTENSION

SECTION 404
WETLAND IMPACTS - PLAN VIEW

0 25 50 100

DATE:
5/10/2016

16
30



DRAFT-WORK IN PROCESS

BLUE LINE LRT EXTENSION

SECTION 404

WETLAND IMPACTS - CROSS SECTIONS

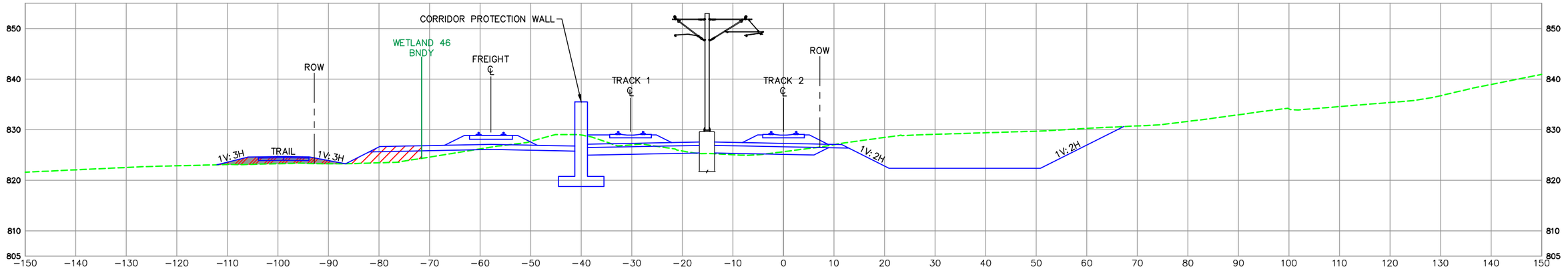
0 5 10 20

DATE: 5/10/2016

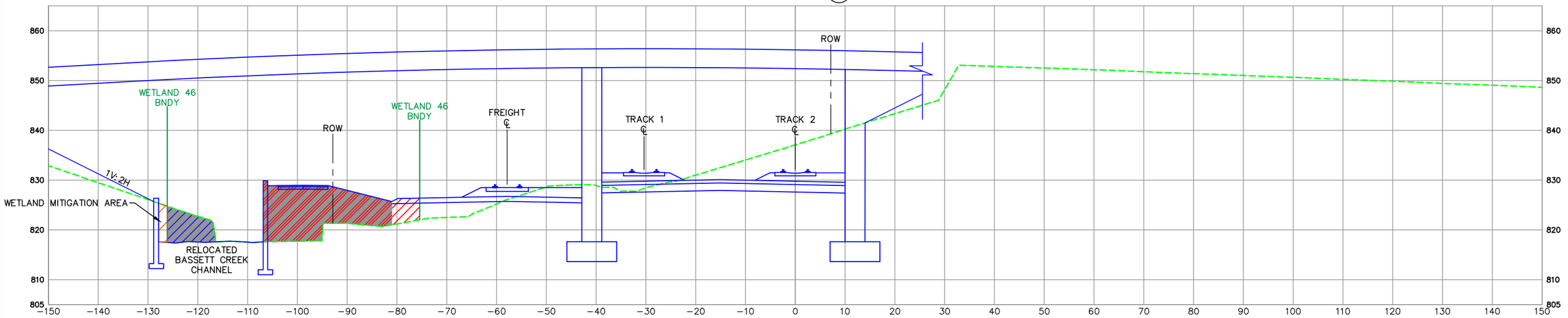
LEGEND

- EXISTING WETLAND BOUNDARY
- EXISTING SURFACE
- PROPOSED FINISH GRADE
- TRACK FILL IMPACTS
- TRAIL/SIDEWALK FILL IMPACTS
- TRACK CUT IMPACTS
- TRAIL/SIDEWALK CUT IMPACTS
- ROAD FILL IMPACTS
- ROAD CUT IMPACTS
- WETLAND MITIGATION AREA
- TEMPORARY IMPACTS

2209+75.53 (3)



2213+41.79 (4)



DRAFT-WORK IN PROCESS

BLUE LINE LRT EXTENSION

SECTION 404

WETLAND IMPACTS - CROSS SECTIONS

0 5 10 20

DATE: 5/10/2016

LEGEND

- EXISTING WETLAND BOUNDARY
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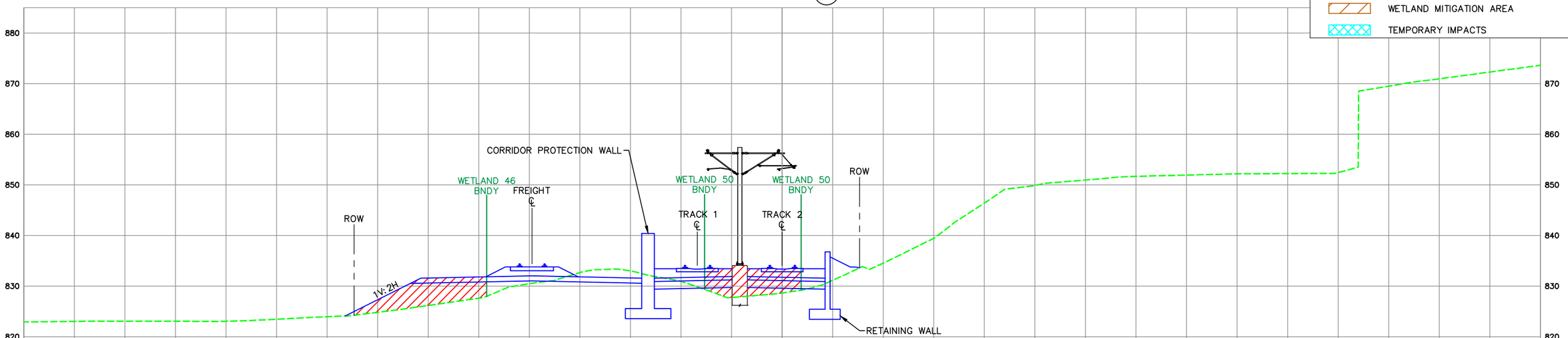
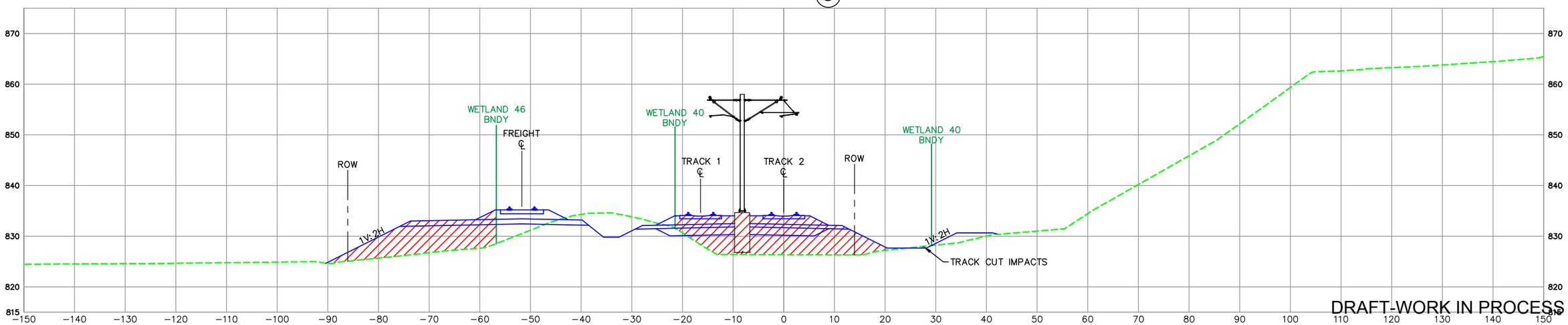
- TRAIL/SIDEWALK CUT IMPACTS
- ROAD FILL IMPACTS
- ROAD CUT IMPACTS
- WETLAND MITIGATION AREA
- TEMPORARY IMPACTS

2225+72.06 (5)



2227+80.72 (6)



DRAFT-WORK IN PROCESS

BLUE LINE LRT EXTENSION

SECTION 404

WETLAND IMPACTS - CROSS SECTIONS

0 5 10 20

DATE: 5/10/2016

19
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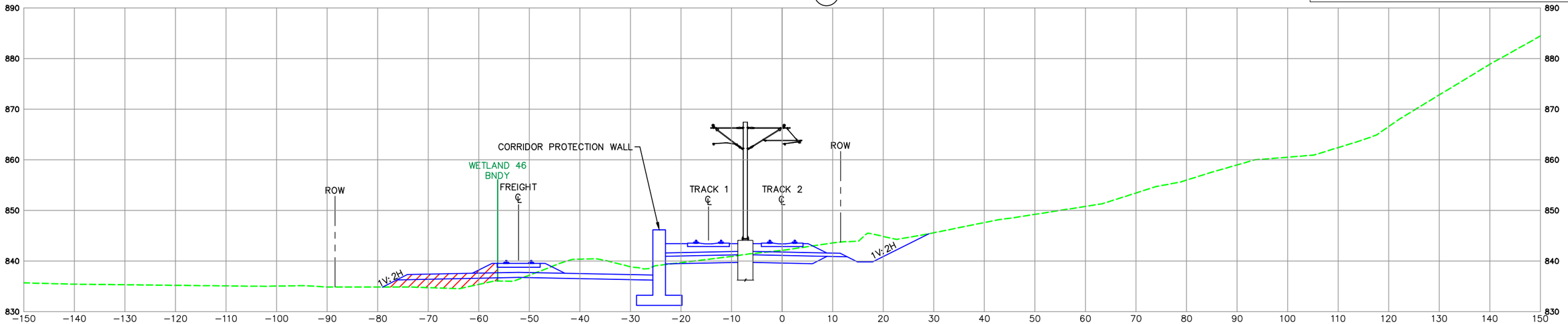
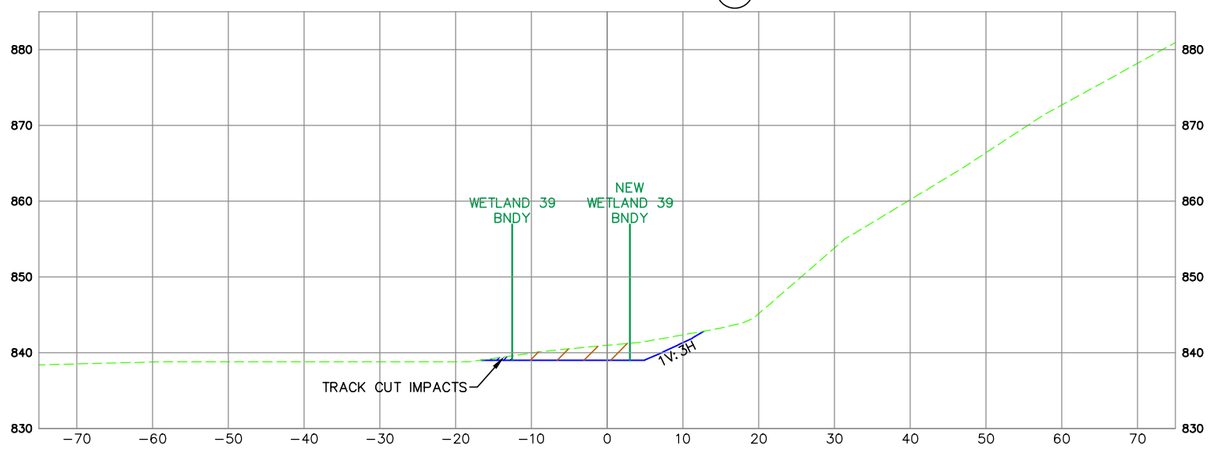
LEGEND

- EXISTING WETLAND BOUNDARY
- EXISTING SURFACE
- PROPOSED FINISH GRADE
- TRACK FILL IMPACTS
- TRAIL/SIDEWALK FILL IMPACTS
- TRACK CUT IMPACTS
- TRAIL/SIDEWALK CUT IMPACTS
- ROAD FILL IMPACTS
- ROAD CUT IMPACTS
- WETLAND MITIGATION AREA
- TEMPORARY IMPACTS

2234+15.20 **7**



SOUTH GOLDEN VALLEY POND **8**



DRAFT-WORK IN PROCESS

BLUE LINE LRT EXTENSION

SECTION 404
WETLAND IMPACTS - CROSS SECTIONS

0 5 10 20

DATE:
5/10/2016

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LEGEND

- EXISTING WETLAND BOUNDARY
- EXISTING SURFACE
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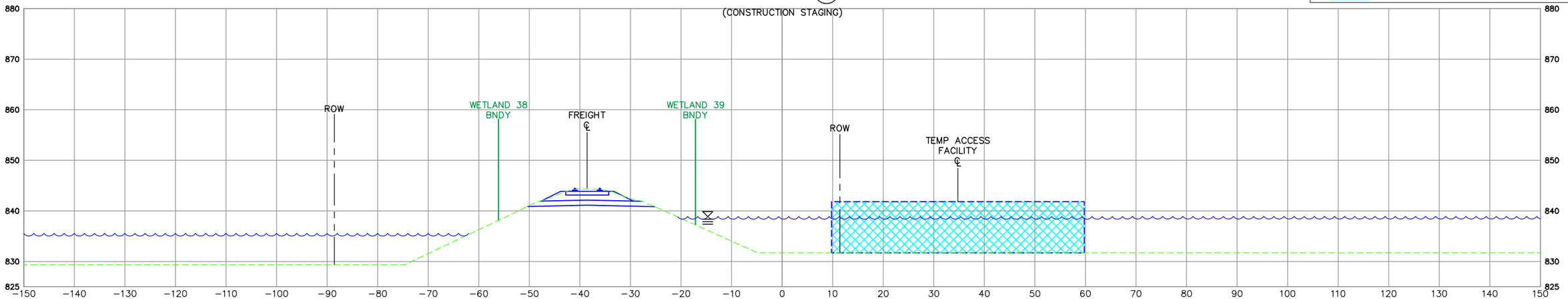
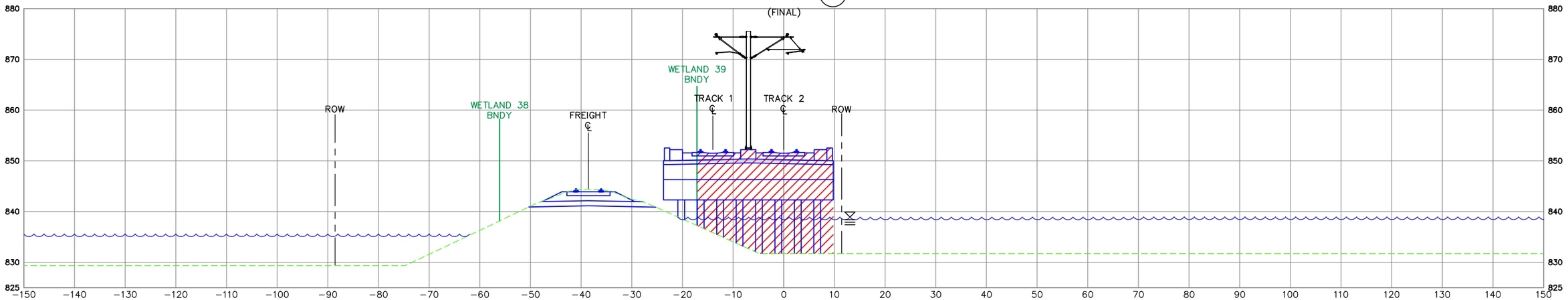
- TRACK CUT IMPACTS
- TRAIL/SIDEWALK CUT IMPACTS
- ROAD FILL IMPACTS
- ROAD CUT IMPACTS
- WETLAND MITIGATION AREA
- TEMPORARY IMPACTS

2254+39.56 **9**
(CONSTRUCTION STAGING)



2254+39.56 **10**
(FINAL)



*NOTE: TRACK FILL IMPACT REPRESENTS ACREAGE OF BRIDGE DECK, MAY BE REDUCED LATER WHEN BRIDGE PIER LOCATIONS ARE FINALIZED

DRAFT-WORK IN PROCESS

BLUE LINE LRT EXTENSION

SECTION 404
WETLAND IMPACTS - CROSS SECTIONS

0 5 10 20

DATE:
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30

LEGEND

- EXISTING WETLAND BOUNDARY
- EXISTING SURFACE
- PROPOSED FINISH GRADE
- TRACK FILL IMPACTS
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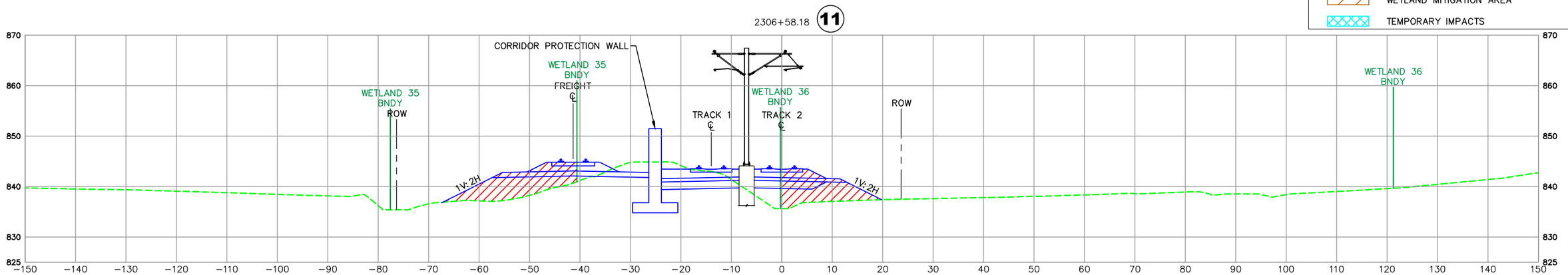
- TRACK CUT IMPACTS
- TRAIL/SIDEWALK CUT IMPACTS
- ROAD FILL IMPACTS
- ROAD CUT IMPACTS
- WETLAND MITIGATION AREA
- TEMPORARY IMPACTS



DRAFT-WORK IN PROCESS

BLUE LINE LRT EXTENSION

SECTION 404
WETLAND IMPACTS - CROSS SECTIONS

0 5 10 20

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5/10/2016

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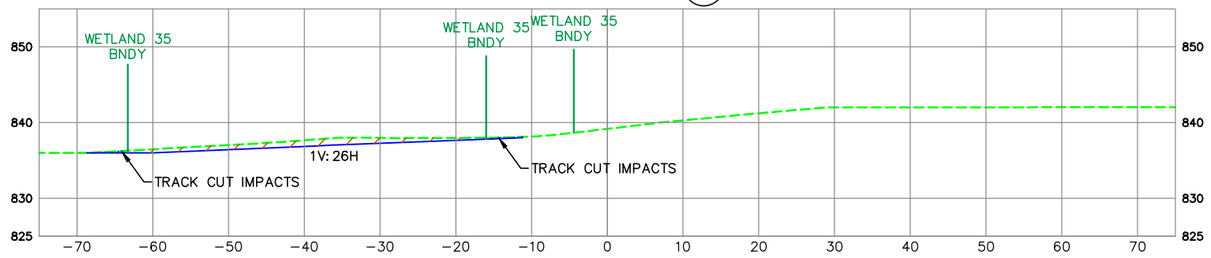
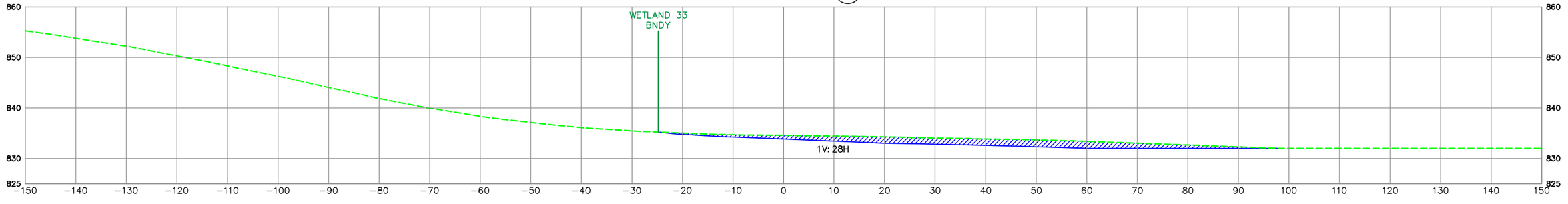
NORTH WETLAND 35 (12)



SOUTH WETLAND 33 (13)



DRAFT-WORK IN PROCESS

BLUE LINE LRT EXTENSION

SECTION 404

WETLAND IMPACTS - CROSS SECTIONS

0 5 10 20

DATE: 5/10/2016

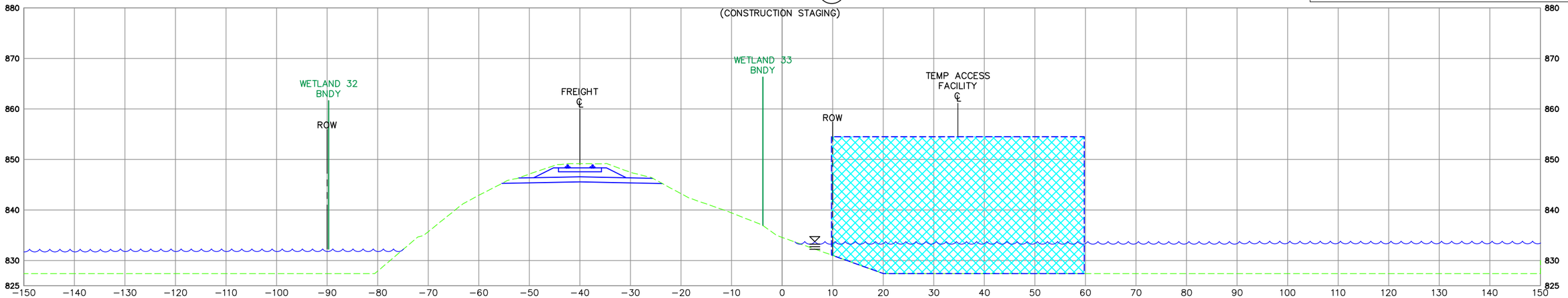
23

30

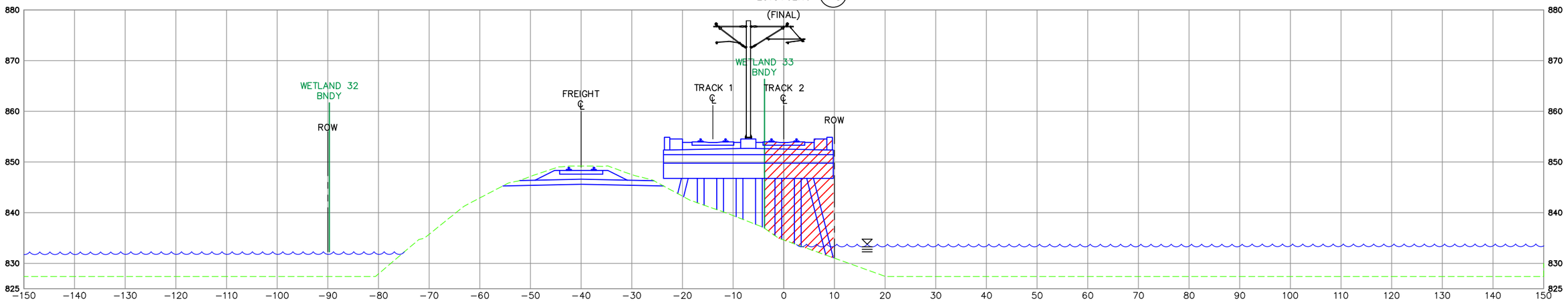
LEGEND

- EXISTING WETLAND BOUNDARY
- EXISTING SURFACE
- PROPOSED FINISH GRADE
- TRACK FILL IMPACTS
- TRAIL/SIDEWALK FILL IMPACTS
- TRACK CUT IMPACTS
- TRAIL/SIDEWALK CUT IMPACTS
- ROAD FILL IMPACTS
- ROAD CUT IMPACTS
- WETLAND MITIGATION AREA
- TEMPORARY IMPACTS

2318+02.19 (14)
(CONSTRUCTION STAGING)



2318+02.19 (15)
(FINAL)



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DRAFT-WORK IN PROCESS

BLUE LINE LRT EXTENSION

SECTION 404
WETLAND IMPACTS - CROSS SECTIONS

0 5 10 20

DATE:
5/10/2016

24
30

LEGEND

- EXISTING WETLAND BOUNDARY
- EXISTING SURFACE
- PROPOSED FINISH GRADE
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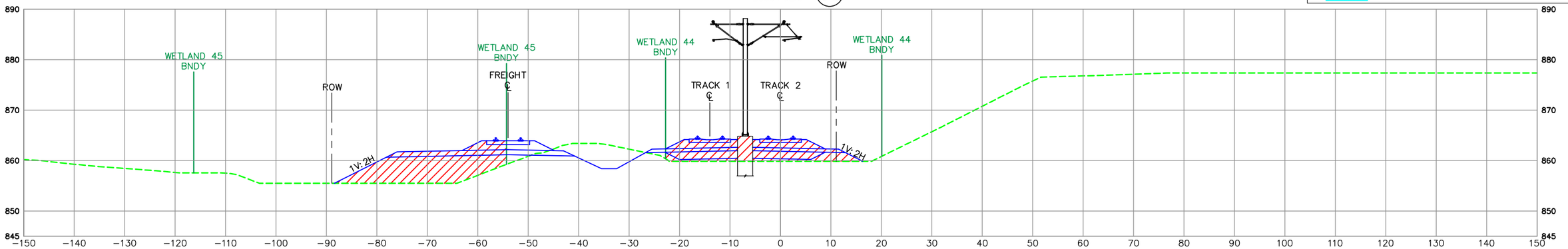
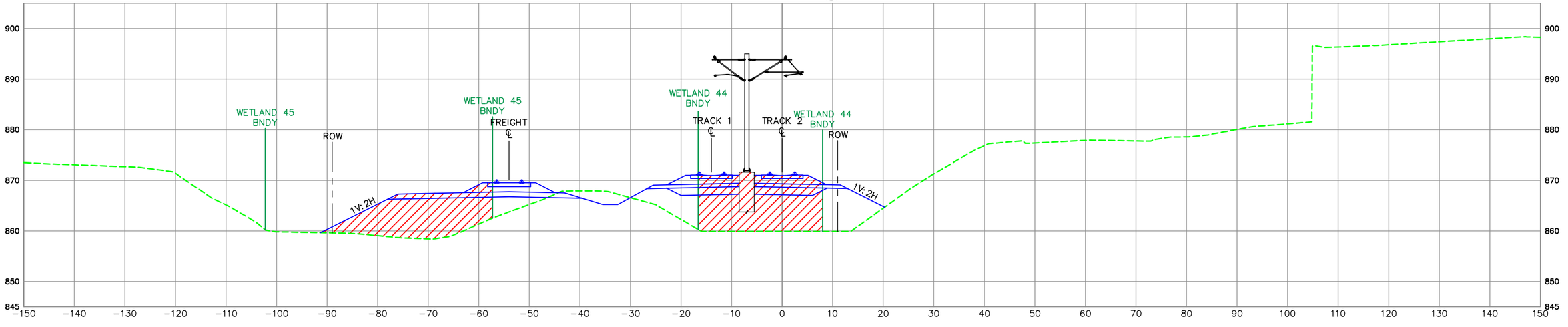
- TRACK CUT IMPACTS
- TRAIL/SIDEWALK CUT IMPACTS
- ROAD FILL IMPACTS
- ROAD CUT IMPACTS
- WETLAND MITIGATION AREA
- TEMPORARY IMPACTS

2336+82.07 (16)



2343+79.18 (17)



DRAFT-WORK IN PROCESS

BLUE LINE LRT EXTENSION

SECTION 404
WETLAND IMPACTS - CROSS SECTIONS

0 5 10 20

DATE:
5/10/2016

25
30

LEGEND

- EXISTING WETLAND BOUNDARY
- EXISTING SURFACE
- PROPOSED FINISH GRADE
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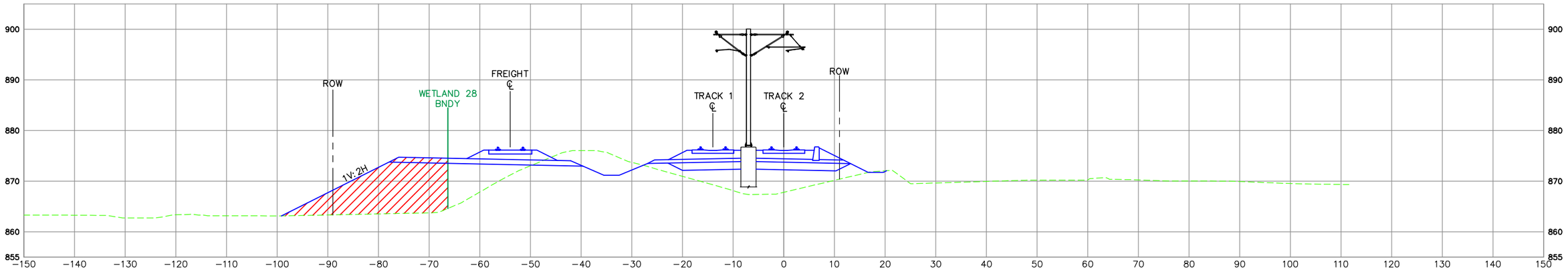
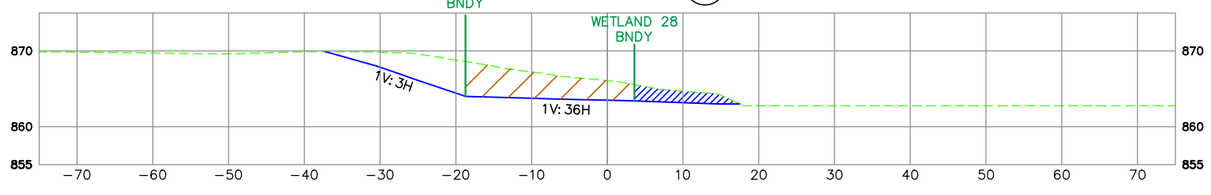
- TRACK CUT IMPACTS
- TRAIL/SIDEWALK CUT IMPACTS
- ROAD FILL IMPACTS
- ROAD CUT IMPACTS
- WETLAND MITIGATION AREA
- TEMPORARY IMPACTS

2705+53.75 **18**



NEW WETLAND 28 BNDY — NORTH WETLAND 28 **19** — WETLAND 28 BNDY



DRAFT-WORK IN PROCESS

BLUE LINE LRT EXTENSION

SECTION 404

WETLAND IMPACTS - CROSS SECTIONS

0 5 10 20

DATE: 5/10/2016

26

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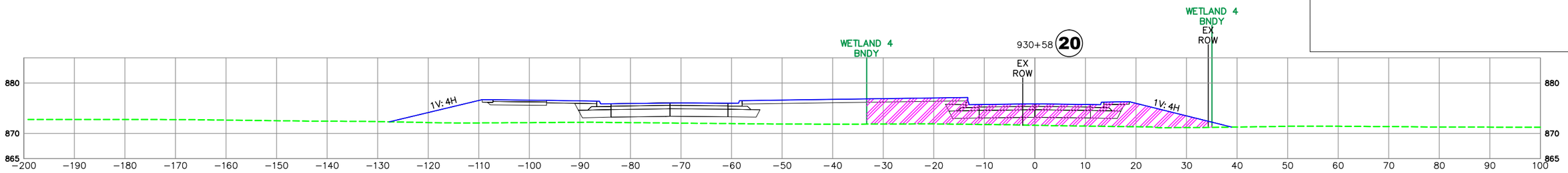

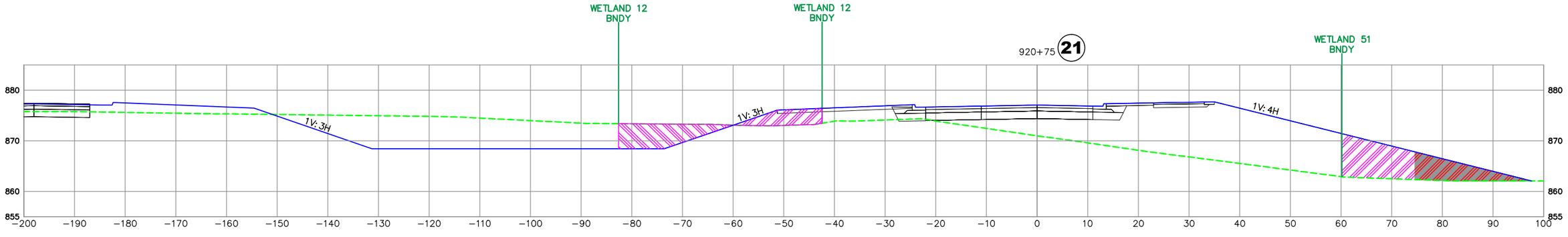

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BLUE LINE LRT EXTENSION

SECTION 404

WETLAND IMPACTS - CROSS SECTIONS

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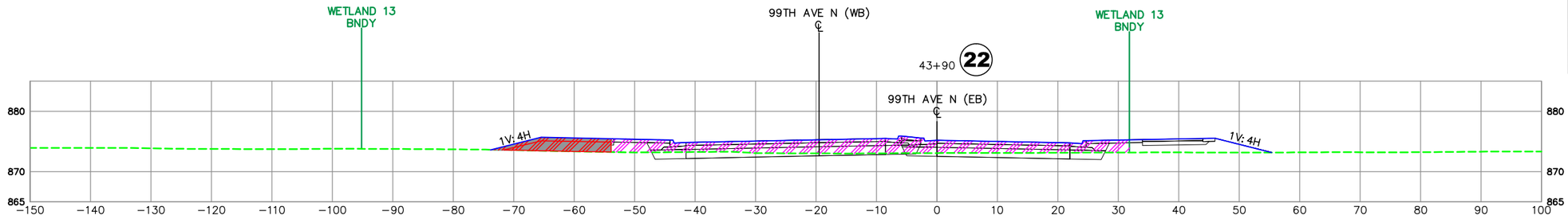

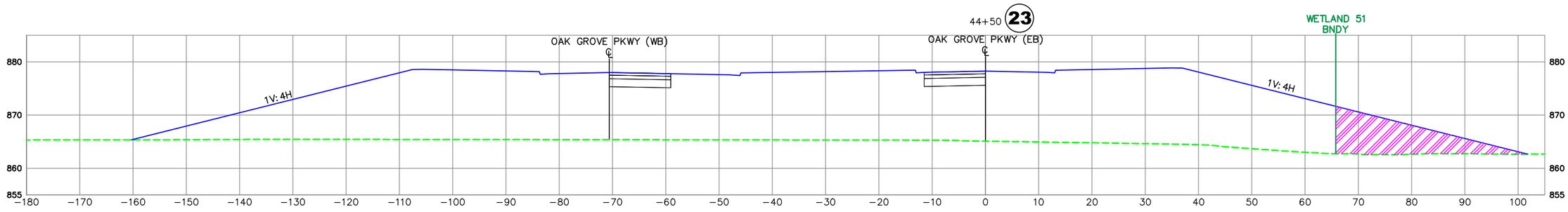

LEGEND

- EXISTING WETLAND BOUNDARY
- EXISTING SURFACE
- PROPOSED FINISH GRADE
- TRACK FILL IMPACTS
- TRAIL/SIDEWALK FILL IMPACTS
- TRACK CUT IMPACTS
- TRAIL/SIDEWALK CUT IMPACTS
- ROAD FILL IMPACTS
- ROAD CUT IMPACTS
- WETLAND MITIGATION AREA
- TEMPORARY IMPACTS

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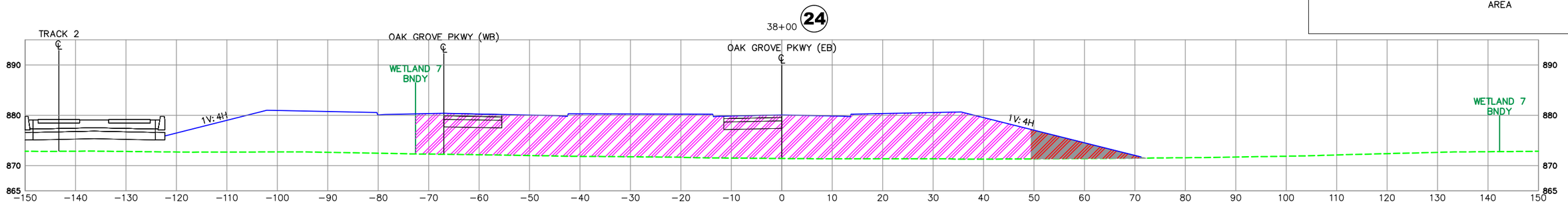

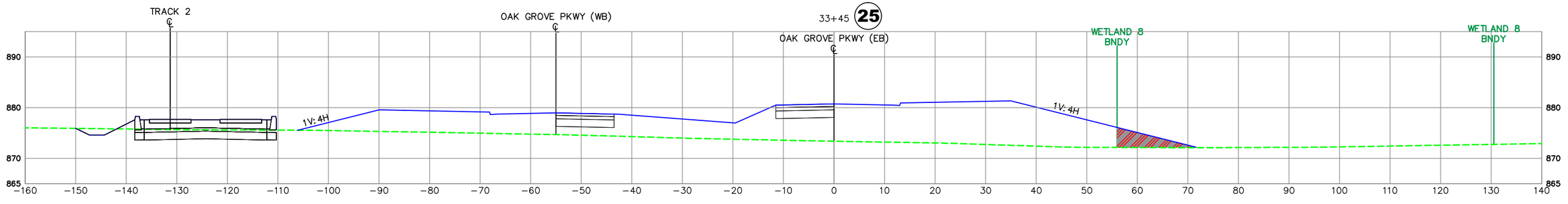

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BLUE LINE LRT EXTENSION

SECTION 404

WETLAND IMPACTS - CROSS SECTIONS

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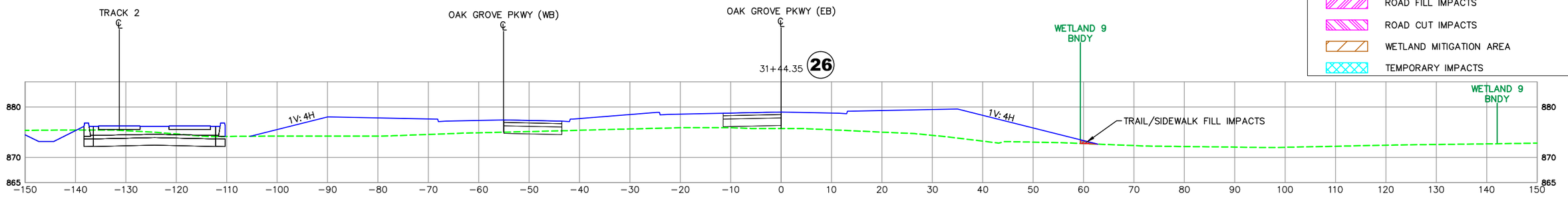

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- ROAD CUT IMPACTS
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- TEMPORARY IMPACTS

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BLUE LINE LRT EXTENSION

SECTION 404
WETLAND IMPACTS - CROSS SECTIONS

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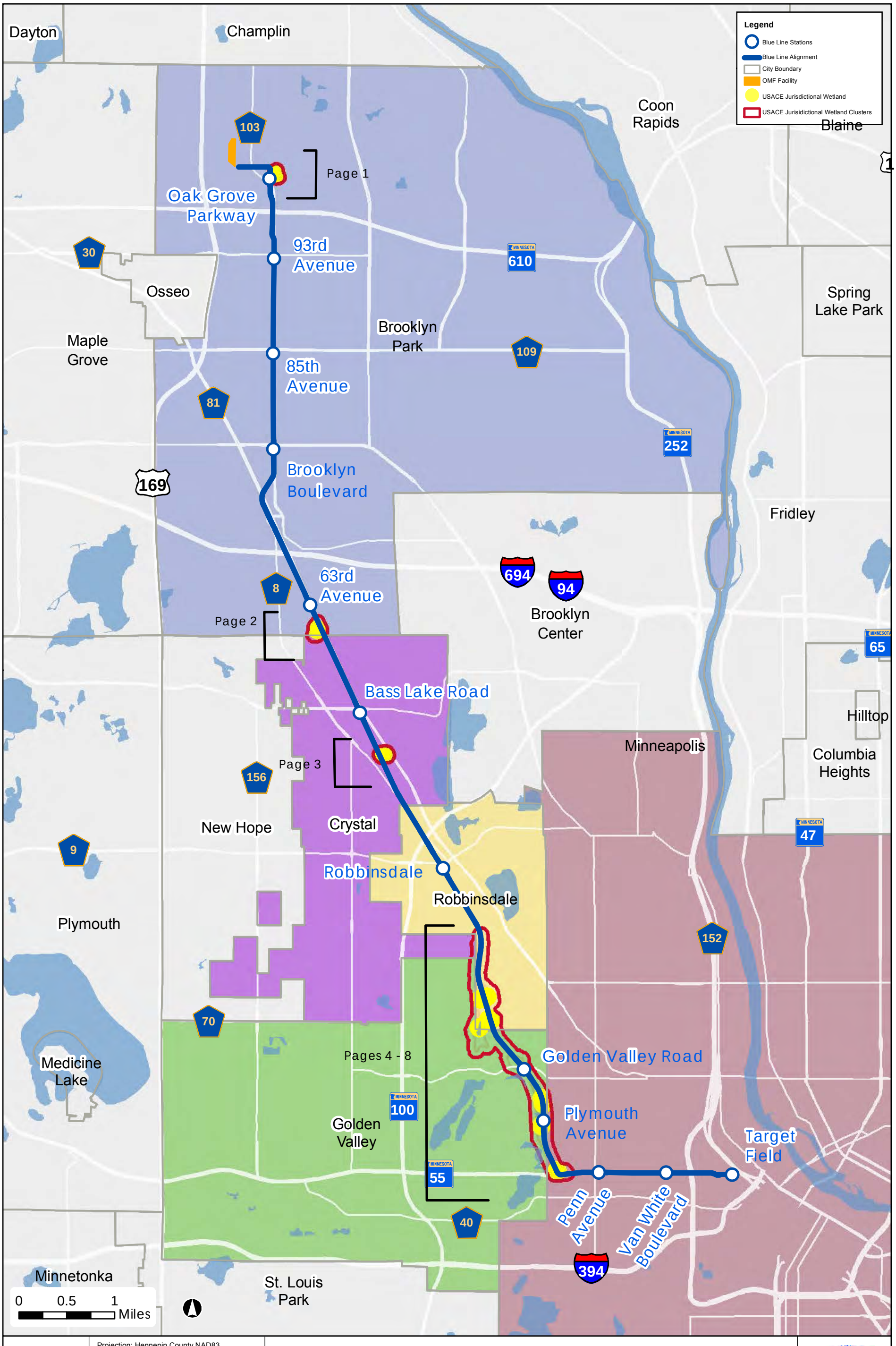
Appendix C

List and Mapbook of Adjacent Landowners

PID	OWNER	TAXPAYER	Address_1	Address_2	Address_3	City	State	Zip	NOTE
0702924110174	BURLINGTON NORTHERN RY	B N & SANTA FE RR CO	PROPERTY TAX DEPT	PO BOX 961089	FORT WORTH TX 76161	FORT WORTH	TX	76161	
0702924410029	JAMES P MILLER	JAMES P MILLER	2933 FRANCE AVE N		ROBBINSDALE MN 55422	ROBBINSDALE	MN	55422	
0702924410030	H A DERESSE & S E ADEDA	H A DERESSE & S E ADEDA	2931 FRANCE AVE N		ROBBINSDALE MN 55422	ROBBINSDALE	MN	55422	
0702924410031	C D DICKERSON & A DICKERSON	CAROLE DICKERSON	2923 FRANCE AVE N		ROBBINSDALE MN 55422	ROBBINSDALE	MN	55422	
0702924410035	P BORRESON & HANNAH BORRESON	PHILLIP BORRESON	HANNAH BORRESON	2905 FRANCE AVE N	ROBBINSDALE MN 55422	ROBBINSDALE	MN	55422	
0702924410036	SAHIR GHANI	SAHIR GHANI	2901 FRANCE AVE N		ROBBINSDALE MN 55422	ROBBINSDALE	MN	55422	
0702924410060	T J & S T BELDEN	T J BELDEN & S T	2909 FRANCE AVE		ROBBINSDALE MN 55422	ROBBINSDALE	MN	55422	
0702924410063	CITY OF ROBBINSDALE	CITY OF ROBBINSDALE	4100 LAKEVIEW AVE		ROBBINSDALE MN 55422	ROBBINSDALE	MN	55422	
0702924410064	CITY OF ROBBINSDALE	CITY OF ROBBINSDALE	4100 LAKEVIEW AVE		ROBBINSDALE MN 55422	ROBBINSDALE	MN	55422	
0702924440004	JULIE K ANDERSON	JULIE K ANDERSON	2735 FRANCE AVE N		ROBBINSDALE MN 55422	ROBBINSDALE	MN	55422	
0702924440005	C T PETERS & J L PETERS	CHRISTOPHER T/JUDY L PETERS	2701 FRANCE AVE N		ROBBINSDALE MN 55422	ROBBINSDALE	MN	55422	
0702924440027	KATHLEEN A RUSHING	KATHLEEN A RUSHING	2747 FRANCE AVE N		ROBBINSDALE MN 55422	ROBBINSDALE	MN	55422	
0811921210005	TARGET CORPORATION	TARGET CORPORATION	PROPERTY TAX DEPT T-0591A	PO BOX 9456	MINNEAPOLIS MN 55440-9456	MINNEAPOLIS	MN	55440-9456	
0911821210003	VILLAGE OF CRYSTAL	CITY OF CRYSTAL	4141 DOUGLAS DR N		CRYSTAL MN 55422	CRYSTAL	MN	55422	
1702924340006	CITY OF MPLS PK BD	CITY OF MPLS PARK BOARD	2117 WEST RIVER RD		MINNEAPOLIS MN 55411	MINNEAPOLIS	MN	55411	
1702924340008	CITY OF MPLS PK BD	CITY OF MPLS PARK BOARD	2117 WEST RIVER RD		MINNEAPOLIS MN 55411	MINNEAPOLIS	MN	55411	
1702924340009	G N RY CO	B N & SANTA FE RR CO	PROPERTY TAX DEPT	PO BOX 961089	FORT WORTH TX 76161	FORT WORTH	TX	76161	
1702924340010	BURLINGTON NORTHERN INC	B N & SANTA FE RR CO	PROPERTY TAX DEPT	PO BOX 961089	FORT WORTH TX 76161	FORT WORTH	TX	76161	
1702924349000									Same area as 1702924340010, 1702924340009
2002924130002	GR NORTH RY CO	B N & SANTA FE RR CO	PROPERTY TAX DEPT	PO BOX 961089	FORT WORTH TX 76161	FORT WORTH	TX	76161	
2002924130045	SOO LINE RAILROAD CO	SOO LINE RAILROAD	REAL ESTATE DEPT SUITE 1525	501 MARQUETTE AVE S	MINNEAPOLIS MN 55402	MINNEAPOLIS	MN	55402	
2002924210003	G N RY CO	B N & SANTA FE RR CO	PROPERTY TAX DEPT	PO BOX 961089	FORT WORTH TX 76161	FORT WORTH	TX	76161	
2002924210004	BURLINGTON NORTHERN INC	B N & SANTA FE RR CO	PROPERTY TAX DEPT	PO BOX 961089	FORT WORTH TX 76161	FORT WORTH	TX	76161	
2002924219000									Same area as 2002924210003, 2002924210004
2002924230002	CITY OF MPLS PARK BOARD	CITY OF MPLS PARK BOARD	2117 WEST RIVER RD		MINNEAPOLIS MN 55411	MINNEAPOLIS	MN	55411	
3211921210001	GT NORTHERN RY CO	B N & SANTA FE RR CO	PROPERTY TAX DEPT	PO BOX 961089	FORT WORTH TX 76161	FORT WORTH	TX	76161	
3211921219000									Same area as 3211921420049, 3211921240020, 3211921210001

3211921240020	BURLINGTON NORTHERN INC	B N & SANTA FE RR CO	PROPERTY TAX DEPT	PO BOX 961089	FORT WORTH TX 76161	FORT WORTH	TX	76161	
3211921420049	BURLINGTON NORTHERN INC	B N & SANTA FE RR CO	PROPERTY TAX DEPT	PO BOX 961089	FORT WORTH TX 76161	FORT WORTH	TX	76161	
3211921430014	HENNEPIN FORFEITED LAND	CITY OF BROOKLYN PARK	ATTN ACCOUNTS PAYABLE	5200 85TH AVE N	BROOKLYN PARK MN 55443	BROOKLYN PARK	MN	55443	



Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., SEH Inc., and USDA.

Figure 1 - Jurisdictional Wetlands

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METRO Blue Line Extension

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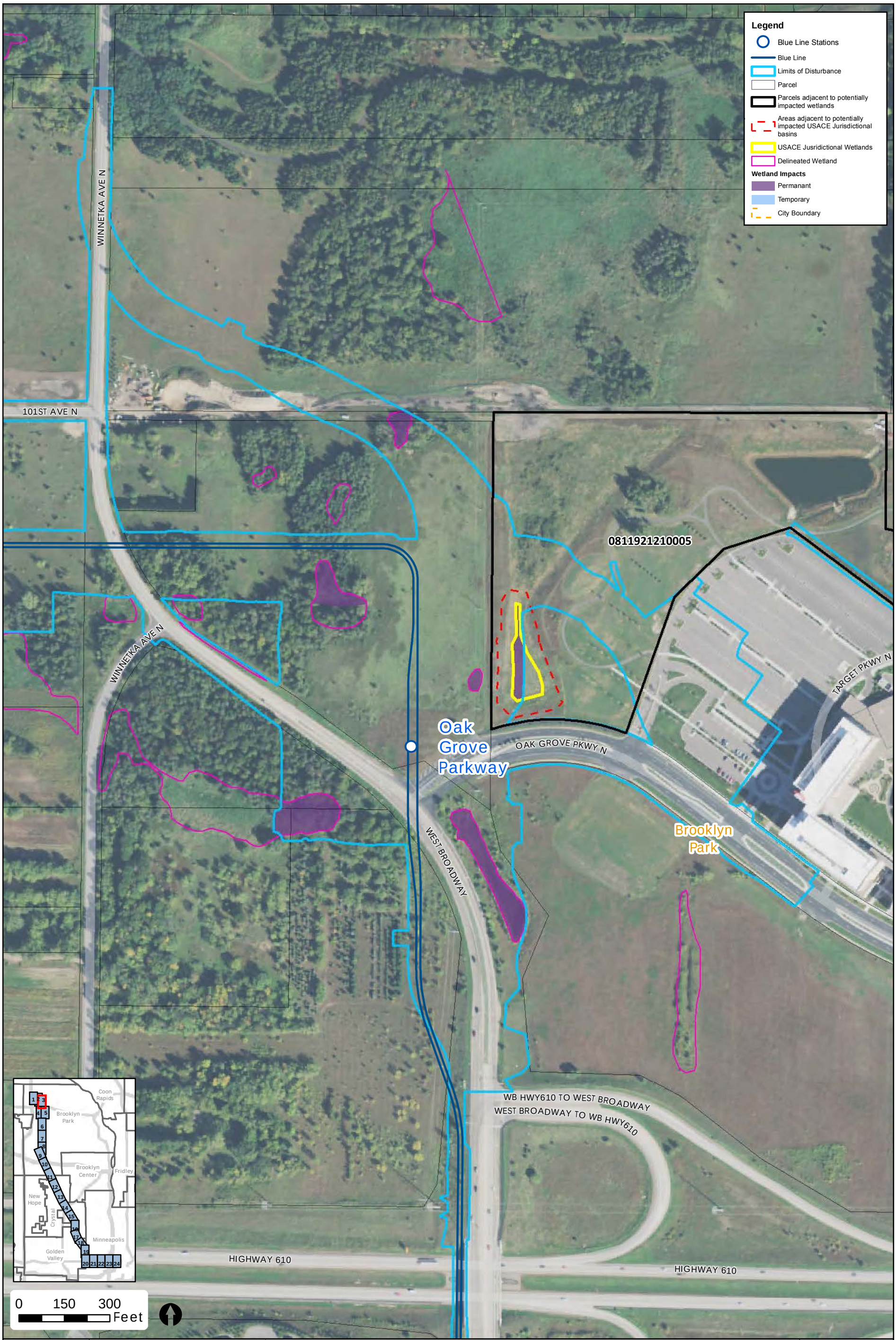

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., and SEH Inc.

Figure 1 - Jurisdictional Wetlands

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METRO Blue Line Extension

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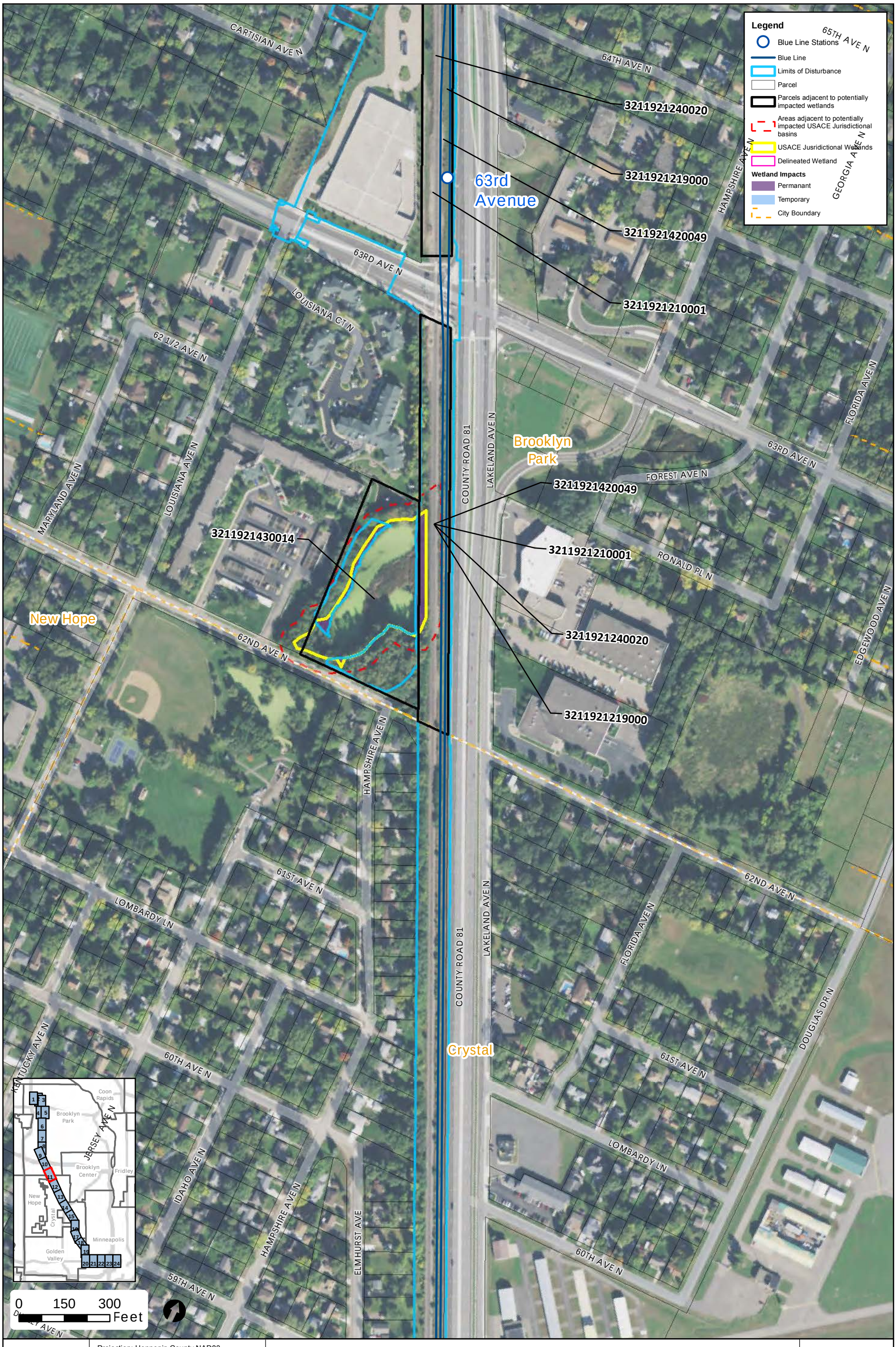

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., and SEH Inc.

Figure 1 - Jurisdictional Wetlands

Page 2

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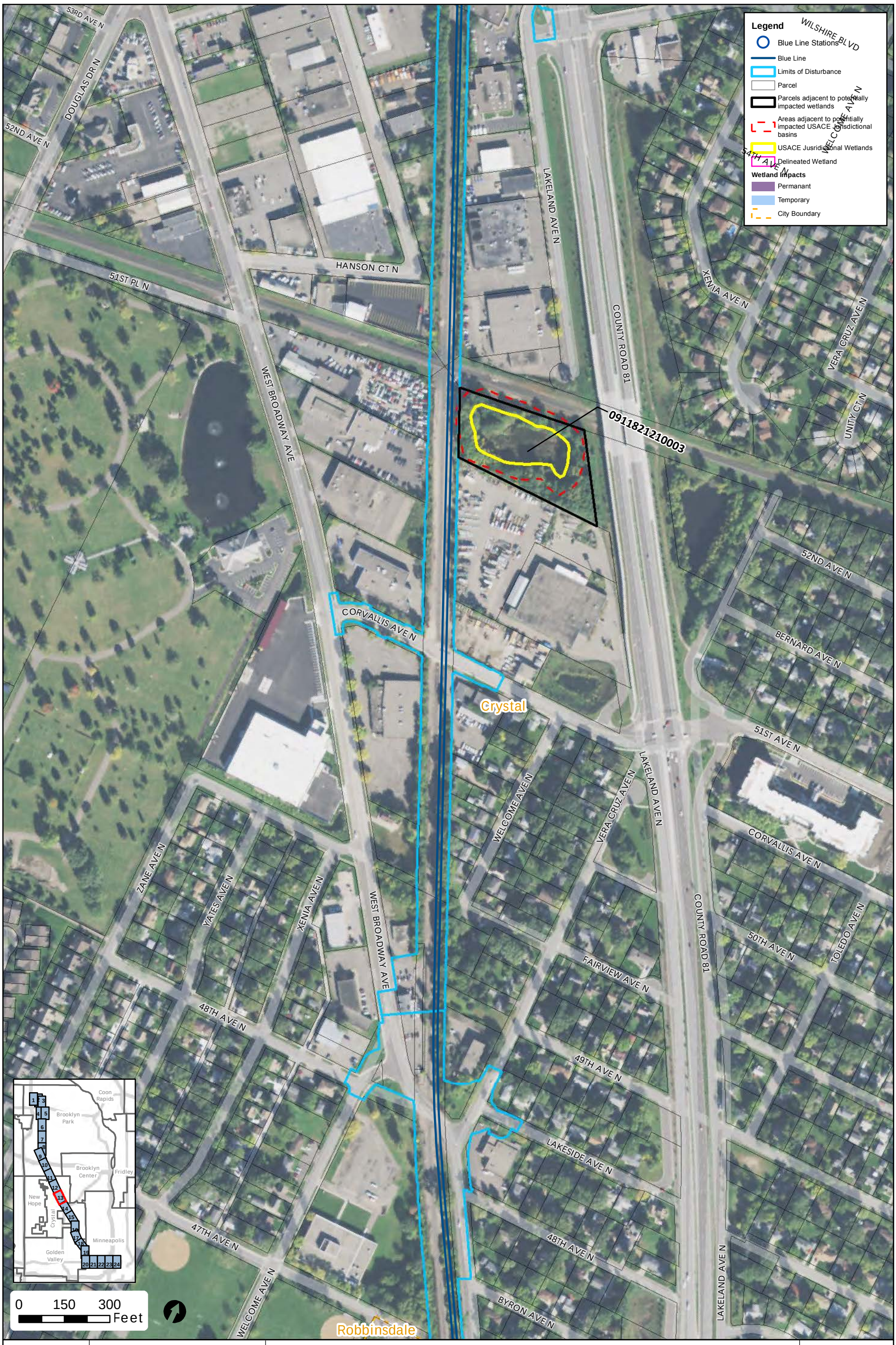

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., and SEH Inc.

Figure 1 - Jurisdictional Wetlands

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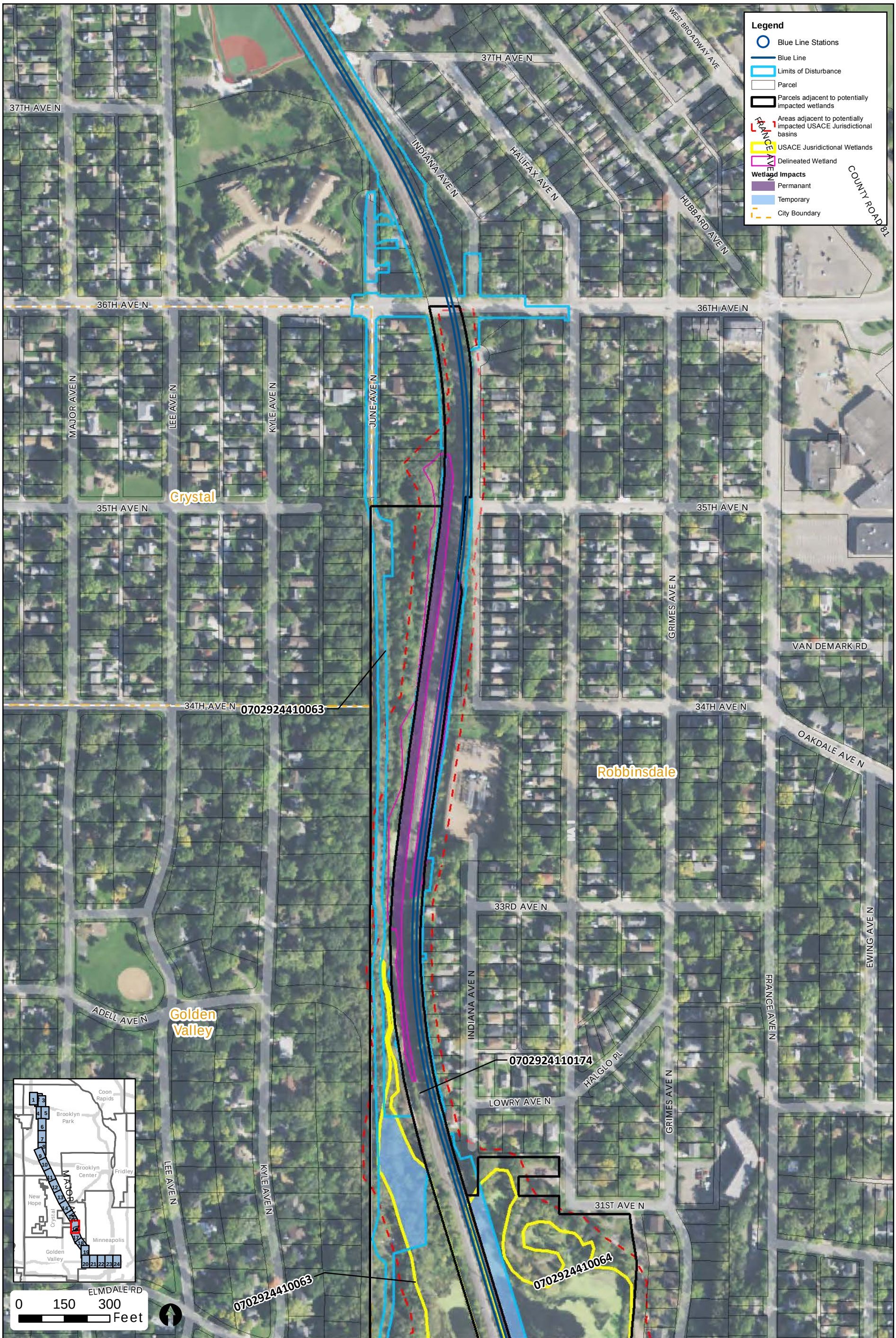

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., and SEH Inc.

Figure 1 - Jurisdictional Wetlands

Page 4

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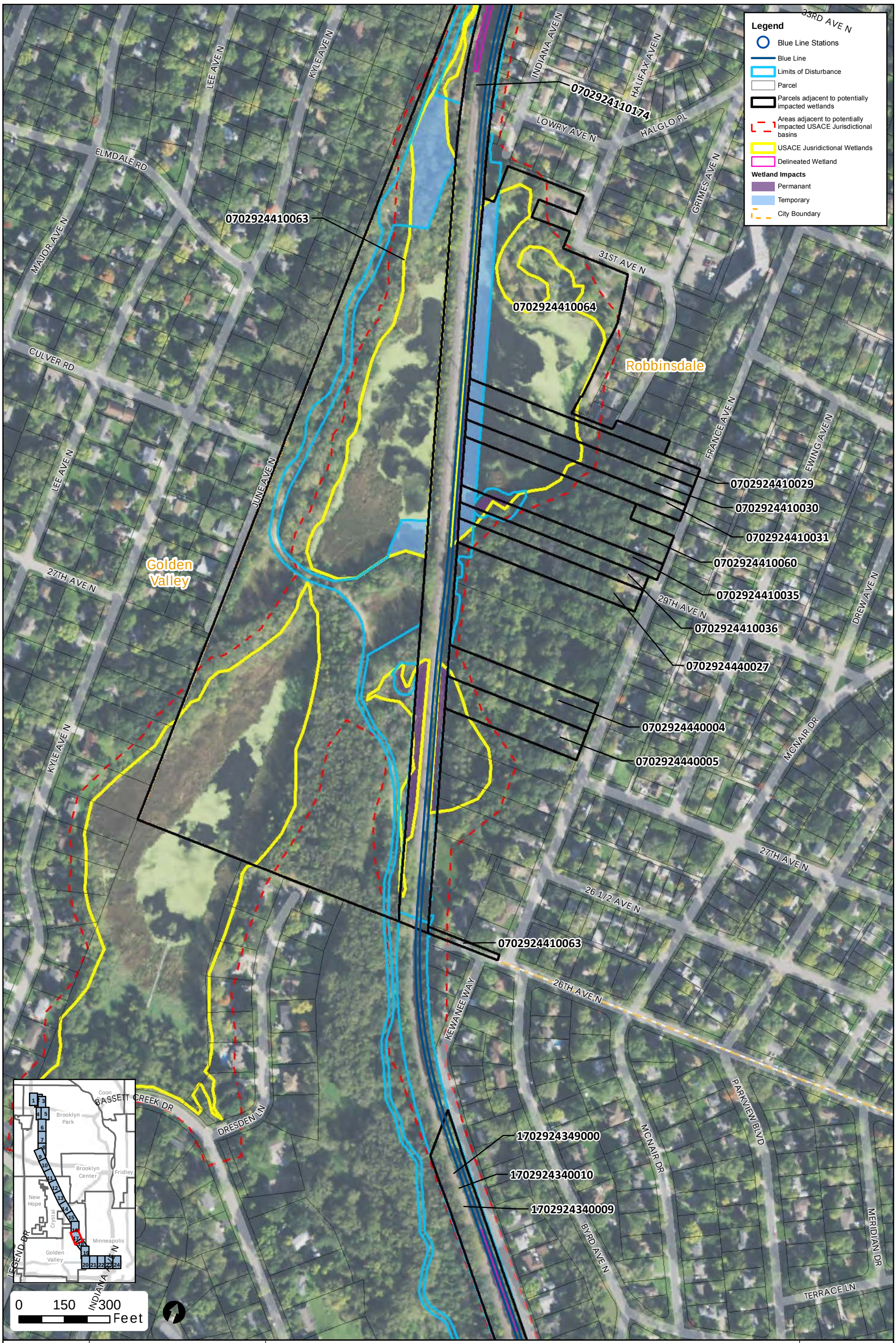

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Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., and SEH Inc.

Figure 1 - Jurisdictional Wetlands

Page 5

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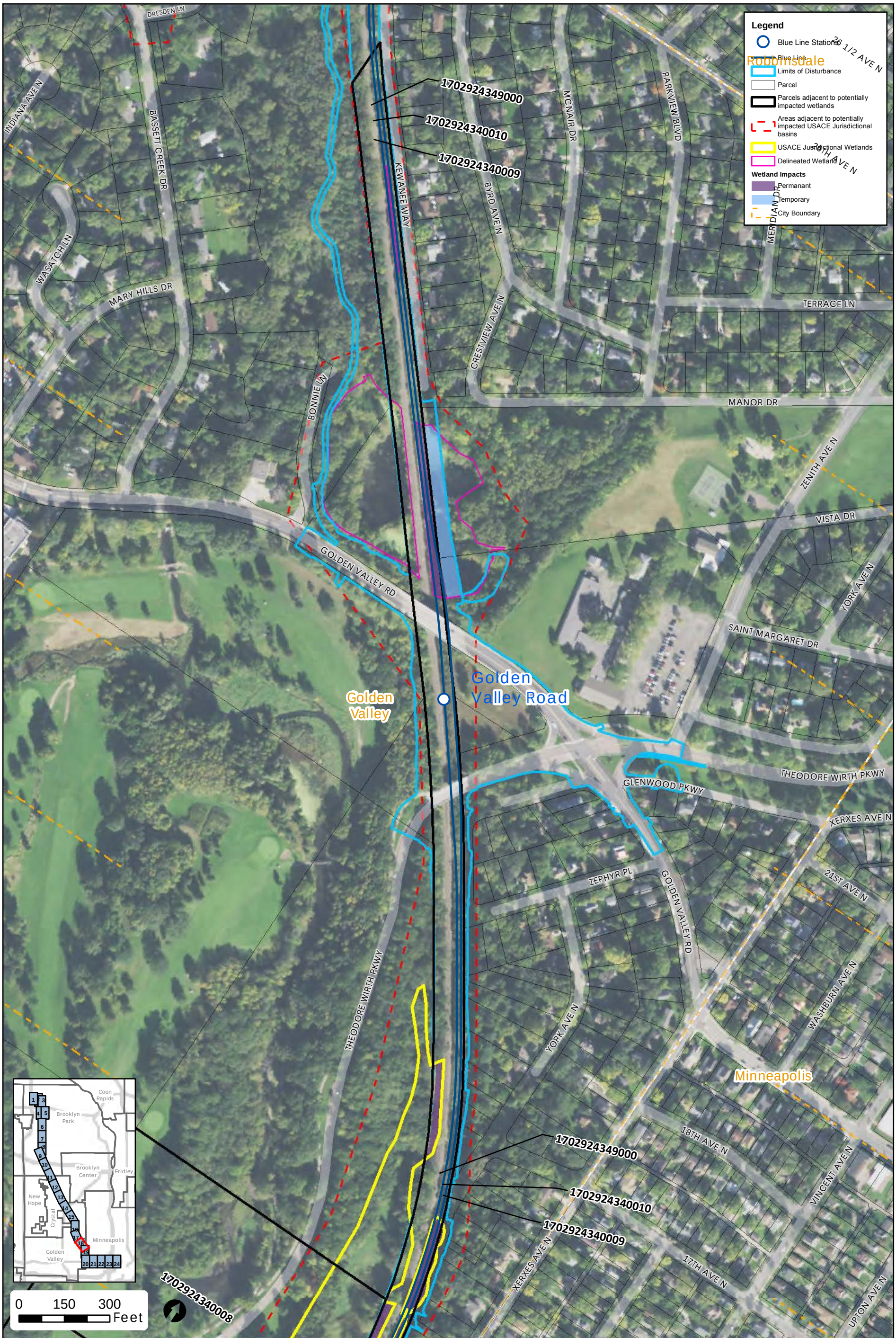

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Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., and SEH Inc.

Figure 1 - Jurisdictional Wetlands

Page 6

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Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., and SEH Inc.

Figure 1 - Jurisdictional Wetlands

Page 7

METRO Blue Line Extension

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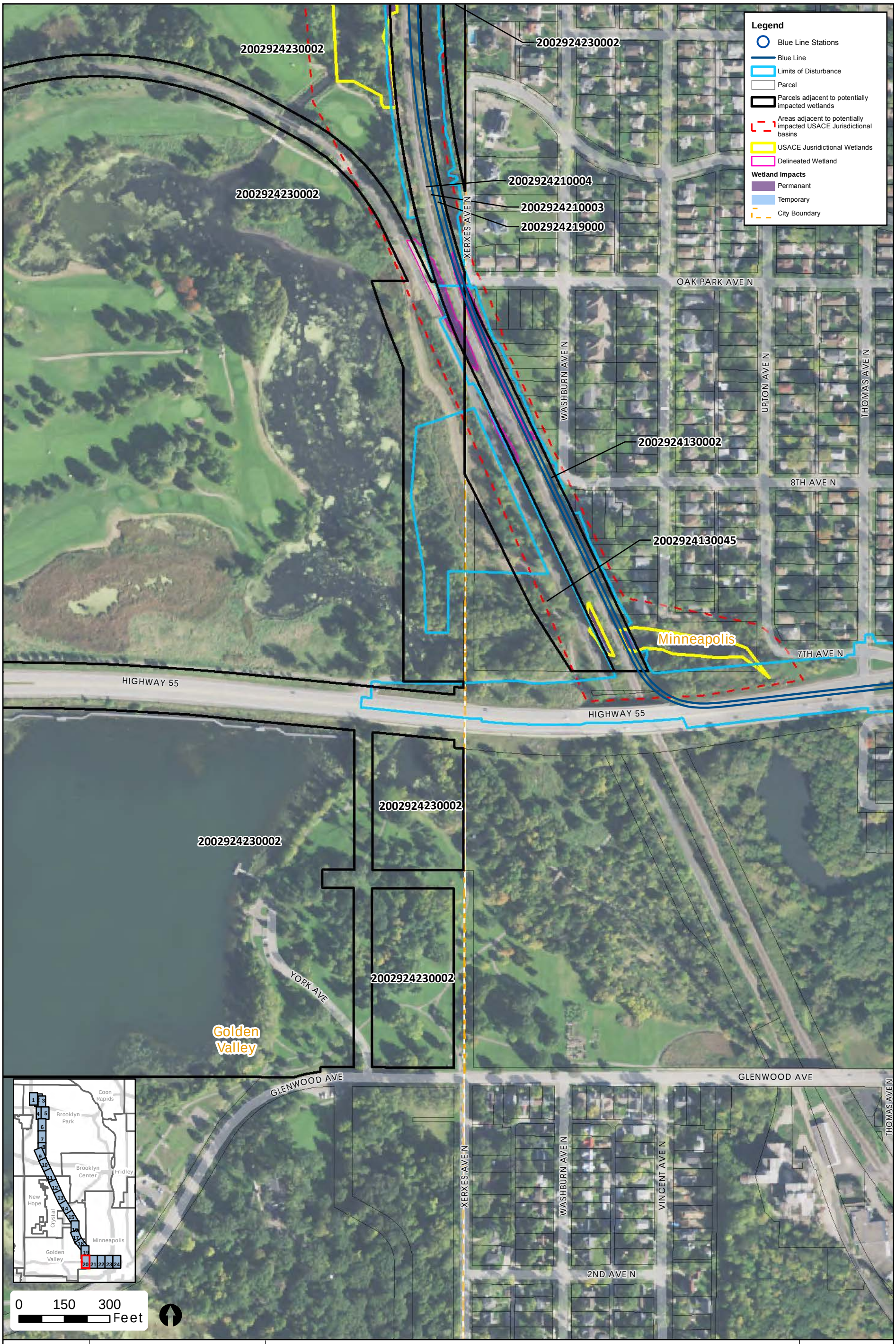

Projection: Hennepin County NAD83
Source: Hennepin County, Metro Transit, MnDOT, MnDNR, HDR Engineering Inc., and SEH Inc.

Figure 1 - Jurisdictional Wetlands

Page 8

METRO Blue Line Extension

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Appendix D

Concept Drawings of Selected Potential On-site Wetland Mitigation Opportunities

EXISTING CONTOURS WILL BE UPDATED WITH SURVEY DATA

CONCEPT DRAWING

LEGEND

- POTENTIAL FLOODPLAIN MITIGATION
- POTENTIAL DITCH TREATMENT AREA
- PROPOSED CONTOURS
- BASSETT CREEK REALIGNMENT

OAK PARK AVE

WASHBURN AVE N

8TH AVE N

CITY OF MINNEAPOLIS PK BOARD

SOO LINE RR

CITY OF MINNEAPOLIS PK BOARD

SOO LINE RR

OLSON MEMORIAL HWY (TH 55)

DRAFT-WORK IN PROCESS

BLUE LINE LRT EXTENSION

Theodore Wirth Regional Park
Floodplain Mitigation ALT 2

01/22/2016

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METROPOLITAN COUNCIL

Kimley»Horn

SRF Consulting Group, Inc.

Feb, 12 2016 01:14 pm H:\BPO\550_Design_Consultant\CAD\005-SEGMENT-GV\PE\EXHIBITS\CIVIL\GV-WR-MPRB-Impacts2.dwg By: rstenglein

Appendix I
Section 404 Coordination

I.2 Coordination with US Army Corps of Engineers

1. Letter from the US Army Corps of Engineers to the Federal Transit Administration concurring on Point 4 (Design Phase Impact Minimization), June 16, 2016

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DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT, CORPS OF ENGINEERS
180 FIFTH STREET EAST, SUITE 700
ST. PAUL, MN 55101-1678

JUN 16 2016

REPLY TO ATTENTION OF
REGULATORY BRANCH

Operations
Regulatory (2012-01051-MMJ)

Ms. Marisol Simon
U.S. Department of Transportation
Federal Transit Administration, Region V
200 West Adams Street, Suite 320
Chicago, Illinois 60606-5253

Dear Ms. Simon:

We have started our review of the Metro Blue Line Extension Light Rail (BLRT) Project Section 404 Clean Water Act permit application, dated May 2016. After reviewing the wetland avoidance and minimization discussion and figures provided in this document we can now concur with Point 4 (Design Phase Impact Minimization) for the BLRT Project, as outlined in the National Environmental Policy Act (NEPA) / Section 404 Clean Water Act merger process.

Your application includes a detailed discussion regarding the avoidance and minimization efforts that have been incorporated into the BLRT project design in order to reduce overall impacts to aquatic resources throughout the project corridor. After reviewing this information we have made a preliminary determination that these avoidance and minimization efforts as proposed are sufficient to satisfy Clean Water Act requirements, including the minimization requirements described in the 404(b)(1) Guidelines.

We have also reviewed the preliminary compensatory mitigation plan for the BLRT project, as described in your application. As proposed, we have made a preliminary determination that this mitigation plan will likely comply with the Federal Mitigation Rule (33 CFR § 332), and the current St. Paul District Mitigation Policy. The mitigation ratios that you have proposed to compensate for various impacts to aquatic resources throughout the BLRT project corridor seem reasonable, and the hybrid approach described in your compensatory mitigation plan, including construction of permittee-responsible mitigation sites along the corridor and purchase of wetland bank credits from within Bank Service Area (BSA) 7, should be adequate to offset unavoidable adverse impacts to waters of the U.S. throughout the project corridor. We look forward to working with you as you finalize the compensatory mitigation plan for this project.

We reserve the right to revisit the preliminary determinations described above if there are any changes associated with this project that would alter the proposed impacts to aquatic resources within the BLRT corridor or the proposed compensatory mitigation as described in your permit application. We also expect that further avoidance and minimization opportunities will be pursued as design details are developed.

We will continue our review of your permit application, with the intent of publishing a Section 404 Clean Water Act Public Notice for this project concurrent with the Public Notice

period for the BLRT Final Environmental Impact Statement. For further information, please contact Melissa Jenny at 651-290-5363 or Melissa.m.jenny@usace.army.mil.

Sincerely,

Chad Konickson
Chief, Regulatory Branch

Copies furnished:
Virginia Laszewski, EPA
Kathryn O'Brien, Metropolitan Council
Dan Soler, Metropolitan Council
Mary Sue Abel, Metropolitan Council
Ben Meyer, BWSR
Stacey Lijewski, Hennepin County
Jeff Olson, SEH

Appendix I
Section 404 Coordination

I.3 US Army Corps of Engineers (USACE) and Technical Evaluation Panel (TEP) Coordination Meeting Notes

1. USACE coordination meeting notes, March 26, 2015
2. TEP coordination meeting notes, May 19, 2015
3. TEP coordination meeting notes, December 8, 2015

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Meeting Summary

METRO Blue Line LRT Extension (BLRT)
5514 West Broadway Avenue, Suite 200, Crystal, MN 55428 www.bluelineext.org

Meeting Title: USACE Coordination Meeting

Date:	3/26/15	**Time:**	1:30 PM	**Duration:**	1.0 hour

Location: USACE Offices – 180 5th Street East, St. Paul, MN

Meeting called by: Kathryn O'Brien – BPO; Melissa Jenny - USACE

Attendees: Melissa Jenny, Tim Smith – USACE
Kathryn O'Brien – BPO
Brent Rusco, Chad Ellos – Hennepin County/BPO
Janet Kennison, Scott Reed – HDR/BPO
Jeff Olson – SEH

Purpose of Meeting: Continuing coordination on Blue Line LRT Extension

Meeting Summary (prepared 4-2-15)

Summary information provided in *italics*.

1) Introduction
2) Review of Agency Roles
   a) Metro Transit – RGU for MEPA and project sponsor
   b) FTA – Federal lead and lead for NEPA
   c) USACE – Cooperating agency under NEPA, Section 404 permitting agency
3) Review of Draft EIS and NEPA/404 Merger process
   a) Concurrence Points 1-3 (Purpose and Need, Alternatives, LEDPA) complete
   b) Concurrent Point 4 – pending (confirm requirements)
4) Next Steps
   a) Review of Issues Map
   b) Wetland Delineation activities
   c) Overall schedule review
5) Next Coordination Meeting

- *Kathryn O'Brien provided an overview of the project and introduced the issue resolution process to the USACE staff.*
  - *Environmental review for the project is being conducted as NEPA/404 merger process, with the USACE as a cooperating agency.*
  - *Through the completion of the Draft EIS, the project has achieved concurrence points 1 through 3 (purpose and need, alternatives, and least environmentally damaging practicable alternative – LEDPA). Concurrence point 4 (permitting) will occur during the Final EIS/ROD process, which is the focus of this meeting.*
- *Jeff Olson discussed the schedule for the wetlands/404 component of the project.*

- *Delineation is planned for late April/May 2015*
- *Obtaining Technical Evaluation Panel (TEP) concurrence on wetland boundaries is planned for June 2015. Given that there are multiple jurisdictions for the state Wetland Conservation Act (WCA), the idea of a "super-TEP" with representation from all WCA Local Governmental Units (LGUs) was discussed.*
- *The first "pre-permitting" meeting is planned for September 2015 – the purpose of this meeting would be to discuss impacts, and mitigation strategies.*
- *The timing of the permit application was discussed – as the USACE is using the FTA's EIS process for its 404 permitting NEPA requirements, the public notice of the application is generally published at the same time as the FEIS.*

- *The new MAP-21 (Moving Ahead for Progress in the 21st Century Act – the current federal law funding surface transportation programs) requirements were discussed. These include the publication of joint Final EIS/ROD documents; the 30 day comment period between Final EIS publication and the issuance of the ROD is eliminated. Therefore the notice of the 404 permit application would need to be published in advance of the ROD. It was noted that two other documents – the Section 4(f) and the Section 106 findings – need to be circulated in advance of the Final EIS/ROD as well, it may make sense to notice the 404 permit application at the same time. The Final EIS team will adjust the project schedule to reflect this.*
- *Jurisdictional determinations (JDs) were discussed. Initially, the Final EIS team assumed preliminary JDs for the project (i.e. the USACE would have jurisdiction over all wetlands on the project. However, another project – the West Broadway Avenue reconstruction – obtained a final JD in 2009 for an isolated wetland along the project corridor. The Final EIS team will review the corridor for possible other isolated basins, and will discuss the potential for final JDs on such basins as appropriate. The USACE mentioned the possibility of a "hybrid" JD where some basins may receive a preliminary JD whereas others would receive a final JD.*
- *The Final EIS team will be scheduling a coordination meeting with the various TEP members and the USACE in the next few weeks.*

Meeting Summary

METRO Blue Line LRT Extension (BLRT)
5514 West Broadway Avenue, Suite 200, Crystal, MN 55428 www.bluelineext.org

Meeting Title: WCA TEP/USACE Coordination Meeting

Date:	5/19/15	**Time:**	1:30 PM	**Duration:**	1.5 hour
Location:	BPO – Conference Room 2				
Meeting called by:	Kathryn O'Brien – BPO; Jeff Olson – SEH; Scott Reed – BPO/HDR				
Attendees:	See sign-in sheet - attached				
Purpose of Meeting:	Coordination on Blue Line LRT Extension				

Discussion Topics

Summary information presented in *italics*.

1) Introductions
2) Project Overview
    - Estimated water resource impacts (wetlands, stream crossings, floodplains) in DEIS
    - Trackage, Stations, Park and Rides, Operations and Maintenance Facilities, other
3) Project Schedule
    - Landowner notification, BNSF right-or entry permit
    - Wetland delineation (field effort), report
    - TEP and Corps concurrence on wetland boundaries and types
    - Field TEP/ Corps meetings
    - Pre-WCA/ Corps Joint Permit Application meetings
    - NEPA Milestones (note joint FEIS/ROD publication)
    - WCA/ Corps Joint Permit Application Submittal
    - Issuance of WCA replacement plan approval and Corps Permit
4) Discussion of potential WCA Exemptions and per Corps, the Preliminary JD/ Final (Approved JD)
5) Conceptual discussion of sequencing; impact avoidance, minimization, and mitigation
6) Brief discussion of other related environmental issues and status (Section 106, USFWS)
7) Adjourn

The Water Resource Agency Kick-off Meeting for Blue Line LRT began at 1:30PM, and adjourned at 3:00PM.

- *The meeting began with introductions.*
- *A helicopter flyover of the corridor was shown to the group to better orient participants regarding the project alignment, stations, and the Operations and Maintenance Facility. Impacts to water resources (wetlands, streams, floodplains) as known in the DEIS were discussed during the flyover review.*
- *A framework for calculating impacts to water resources in the FEIS was discussed; this will consist of field wetland delineations (with agency boundary concurrence) and refinements in the project footprint. Clarification was provided that footprint means trackage, operations and maintenance facilities,*

stations, park and rides, and other associated infrastructure. The project team emphasized that delineations are being conducted in all of these areas.

- *A draft map of WCA LGU boundaries and relevant watershed district boundaries was shown to the group – some revisions are needed. Also, a few WCA LGU staff have changed – those changes will be incorporated into a final map.*
- *An update on wetland delineation progress was given – the field effort underway since early May and will be finished in early June. Information is not yet in a form that can be distributed to the TEP and Corps. In general, field delineations north of Hwy 610 appear to be considerably smaller in area than what was mapped by the NWI as used in the DEIS for impact estimation. Other areas in the southern portion of the project corridor appear to be generally similar to the boundaries presented in the DEIS.*
- *Preliminary wetland boundary information will be distributed to the group in order to determine which LGU has the majority of wetland impacts. The Blue Line Project Office (BPO) will arrange a teleconference call among WCA LGUs and Corps to discuss how WCA Notices of Decision will be processed for this linear project which traverses many LGUs. It was discussed how this was handled for the Southwest LRT – each LGU along the corridor chose to process its own approval. There appeared to be some interest in consolidating the WCA approval process under one LGU, but the LGUs will require the preliminary impact information prior to determining how it will be handled for the Blue Line LRT.*
- *TEP meetings will be convened during the month of June in order to gain TEP and Corps concurrence on wetland boundaries. It was recommended that TEP field meetings be scheduled at a pre-determined time each week; core TEP members (and Corps) would typically attend all field meetings and appropriate WCA LGUs would join per the boundaries of their jurisdiction.*
- *The group discussed that the water resources agency kick-off meeting would be the first of likely 3 similar "Super TEP" meetings (the next ones would present more detailed information on wetland boundaries and design refinements and ultimately a Pre-Application TEP (Corps) meeting).*
- *The group discussed previous delineation efforts, agency coordination, areas previously determined to be outside of the scope of WCA, and final (approved) jurisdictional determinations that were previously obtained from the Corps. It was also discussed that these findings would need to be updated as they have now expired.*
- *The group discussed that the WCA/ Corps Joint Permit Application would be submitted around May 2016. Based on estimated permit processing times for an Individual Permit (given the amount of wetland impact on the Blue Line LRT project an Individual Permit is assumed) – it is estimated that a permit would be issued in approximately September 2016 (after the publication of the BLRT Final EIS and Record of Decision).*
- *Details on sequencing, including wetland impact avoidance, wetland impact minimization, and mitigation for unavoidable wetland impacts will be forthcoming as design is refined. Sequencing efforts will be described in detail in the WCA/ Corps Joint Permit Application.*
- *Related environmental issues such as Section 106 and USFWS issues were briefly discussed.*

Meeting Summary

METRO Blue Line LRT Extension (BLRT)
5514 West Broadway Avenue, Suite 200, Crystal, MN 55428 www.bluelineext.org

Meeting Title: WCA TEP/USACE Coordination Meeting

Date:	12/8/15	**Time:**	10:00 AM	**Duration:**	1.5-2 hours
Location:	HDR – 701 Xenia Avenue South, Suite 600, Golden Valley, MN 55416				
Meeting called by:	Kathryn O'Brien – BPO; Jeff Olson – SEH; Scott Reed – BPO/HDR				
Attendees:	Per meeting invite				
Purpose of Meeting:	Continued coordination on Blue Line LRT Extension				

Discussion Topics

1) Introductions
2) Project Review
3) Project Schedule Update
    - February-May 2016 – FTA and cooperating agency review of Final EIS
    - June 2016 – publish Final EIS; notice of 404/DNR/WCA permit application
    - August 2016 – Record of Decision and 404/DNR Permit/WCA approval
4) Summary of Impacts
5) Jurisdictional Issues
    - WCA
    - USACE
    - DNR
6) Target Corporation Mitigation Site and Brooklyn Park Mitigation Site Discussion
7) Open Discussion
8) Adjourn

Summary information presented in *italics*.

The meeting began at 10:00AM with introductions and an overview of the project. Attendees are appended in the sign in sheet.

The total extent of delineated wetlands and delineated storm ponds was discussed. Emphasized that the distinction between natural wetlands and storm ponds are at this point just an assertion and will require concurrence from Wetland Conservation Act (WCA) Local Governmental Units (LGUs) and the Corps.

The total impacts, broken out by wetland type, to wetlands (7.36 ac) and storm ponds (8.53 ac) were presented. Total impact broken out by wetland/storm pond and by municipality were presented. The largest areas of impact are in Brooklyn Park and Robbinsdale. It was suggested that impacts also be presented broken out by WCA LGU. Agreed that the Blue Line Project Office (BPO) will do that.

Jurisdictional considerations were discussed with respect to WCA, Corps, and the Minnesota Department of Natural Resources (DNR). Several delineated basins were discussed, specifically those that appear to have either been excavated in uplands (WCA jurisdiction related) or those that may not have hydrologic connections to Waters of the US (Corps jurisdiction-related). It was agreed that, as an intermediate step toward the WCA/ Corps Joint Permit Application, BPO would submit additional detail about several delineated basins where jurisdiction is uncertain. BPO would then gain concurrence on jurisdiction of these basins from WCA LGUs in the form of a "No Loss" determination where applicable. BPO would also gain concurrence on Corps jurisdiction for this suite of basins.

The team noted that approximately 400 linear feet of Bassett Creek would be shifted to the west under the Plymouth Avenue bridge to accommodate the LRT tracks and the shifted BNSF track.

Melissa Jenny (Corps) summarized a process that is a hybrid between an "Approved Jurisdictional Determination (JD)" and a "Preliminary JD". Those basins that are WCA jurisdictional would automatically be part of the "Preliminary JD" - therefore Corps jurisdictional. Other basins outside of the "Preliminary JD" group would be scrutinized based on basin-specific data presented to the Corps for analysis.

Wetland #28 (City of Brooklyn Park) is a mitigation site in the NW quadrant of 62nd Ave N and the Blue Line. Additional data will be collected concerning areas that were designated as New Wetland Credit (NWC) and Public Value Credit (PVC). Ed Mattheisen (representing Shingle Creek/West Mississippi WMCs) may have some information on this. Some fill impacts will occur as a result of moving the BNSF several feet westward. Other impacts may occur as a result of excavation in places to increase storm storage/treatment volume.

A wetland mitigation strategy was discussed, including a component of on-site mitigation and purchase of private wetland mitigation credits. On-site opportunities potentially include

- *a ~5.5 acre polygon that lies partially within Theodore Wirth Regional Park, just north of Highway 55 and west of the BNSF freight tracks, and*
- *an area on the north side of Shingle Creek (actually within the CSAH 103 project area, but potentially suitable for concurrent mitigation).*

Both on-site areas also are intended for compensatory floodplain volumes. It is unknown at this time how much wetland mitigation these areas may yield.

Ben Meyer (BWSR) mentioned that a considerable amount of private wetland mitigation banked credits would be coming on-line fairly soon (within 2016). These credits would be suitable for the Blue Line needs.

The Target Corporation Mitigation Site was discussed. A perpetual conservation easement was recorded on this site in 2004. It was never banked, rather it was used for direct replacement of 2.18 acres of wetland impact that occurred when the Target headquarters was constructed. At a 2:1 ratio, 4.46 acres of NWC was created. 8.55 acres of WCA credit was created (100% NWC, 100% PVC upland buffer, 75% PVC storm pond). Wes Boll presented a figure that showed that the credited storm ponds lie to the east of the northern edge of the easement. It was discussed that, while the Site was monitored for 5 years (hydrology and extent of invasive species), it was not certified at the end of the monitoring period. Water tables have been dropping rapidly in Brooklyn Park and other areas of the Anoka Sandplain. It was determined that a wetland delineation on the site in the spring (2016) would be appropriate. If wetland is no longer present in the site in what is currently the footprint of needed local road connections - then no mitigation would be required. The loss of hydrology would be determined to be a "force majeure" that occurred prior to Blue Line-related footprint. If the Blue Line would impact existing wetland (or PVC upland buffer) then the appropriate wetland mitigation ratio would be 2:1. Ben Meyer (BWSR) stated that on-site mitigation in Brooklyn Park would likely fail hydrologically and therefore that might not be the best strategy for mitigation. If needed, purchase of suitable private mitigation credits might be the most efficient strategy.

The WCA/ Corps Joint Permit Application will be submitted to the WCA LGUs and Corps in May 2016 in anticipation of Public Noticing of the Permit Application in June 2016. A Technical Memorandum will be submitted to the WCA LGUs and Corps summarizing BPO's assertions on jurisdictional considerations.

The Blue Line meeting adjourned at 12:30 PM.

Appendix J
Section 4(f)/6(f) Supporting Materials

The following is a list of supporting materials including resolutions and meeting notes documenting coordination efforts with stakeholders in the Section 4(f) and 6(f) processes.

J.1 Coordination with Section 4(f)/6(f) Stakeholders

1. Minneapolis Park and Recreation Board resolution on their support of the proposed BLRT Extension project, November 4, 2015
2. Sochacki Park Joint Powers Agreement Board resolution recommending mitigation actions for the temporary occupancy of Sochacki Park, February 8, 2016
3. Federal Transit Administration letter to the National Park Service inviting it to become a Cooperating Agency for the proposed BLRT Extension project, April 22, 2016
4. National Park Service letter accepting Cooperating Agency status for the proposed BLRT Extension project, May 2, 2016
5. Federal Transit Administration letter to the US Department of the Interior transmitting the Amended Draft Section 4(f) and 6(f) Evaluation for review and comment, May 18, 2016
6. National Park Service letter concurring on conversion of Sochacki Park: Sochacki Management Unit in compliance with Section 6(f), June 9, 2016
7. Minnesota Department of Natural Resources email concurring on Amended Draft Section 4(f) finding on Glenview Terrace Park, June 17, 2016
8. US Department of the Interior letter concurring on Amended Draft Section 4(f) and 6(f) Evaluation, June 28, 2016

J.2 General Coordination with Park Stakeholders through Parks Issue Resolution Team (IRT) Meetings

1. Proposed BLRT Extension project Parks IRT Meeting notes, April 28, 2015
2. Proposed BLRT Extension project Parks IRT Meeting notes, May 26, 2015
3. Proposed BLRT Extension project Parks IRT Meeting notes, June 23, 2015
4. Proposed BLRT Extension project Parks IRT Meeting notes, August 25, 2015
5. Proposed BLRT Extension project Parks IRT Meeting notes, November 5, 2015
6. Proposed BLRT Extension project Parks IRT Meeting notes, November 13, 2015
7. Proposed BLRT Extension project Parks IRT Meeting notes, December 9, 2015
8. Proposed BLRT Extension project Parks IRT Meeting notes, January 14, 2016
9. Proposed BLRT Extension project Parks IRT Meeting notes, January 27, 2016

J.3 Other Supporting Materials

1. *Deep Bore Tunnel Analysis Technical Memorandum*
2. *Deep Tunnel Map Book*
3. *Alignment Shift Map Book*

Coordination with the Minnesota State Historic Preservation Office as a Section 4(f) Official with Jurisdiction can be found in **Appendix H**.

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Resolution 2015-331

Resolution Stating Specific Positions of the Minneapolis Park and Recreation Board Related to the Blue Line Light Rail Transit Extension

Whereas, The Minneapolis Park and Recreation Board (MPRB) is the steward of the Minneapolis parks;

Whereas, The proposed Blue Line Light Rail Transit Extension, also known as the Bottineau Line, will pass through and is close to Theodore Wirth Regional Park, which is owned and managed by the MPRB;

Whereas, Regional transportation systems like the light rail network are designed to connect the places where people live, work, and play, and that MPRB is committed to being a constructive participant in the vitality of the region through operation of regional parks;

Whereas, A Memorandum of Understanding (MOU) between MPRB and the Metropolitan Council is in place that allows MPRB the ability to take an official stance on the Bottineau Line's project scope and budget prior to a vote on such by the Corridor Management Committee (CMC);

Whereas, MPRB staff have been involved in ongoing design discussions on various aspects of the Bottineau Line and have found the working relationship with the Bottineau Project Office (BPO) to be a positive one;

Whereas, The BPO has stated that it will need to encumber park land temporarily and permanently in order to construct the Bottineau Line, and such encumbrance will require MPRB and possibly district court approval; and

Whereas, This resolution is supported by the MPRB 2007-2020 Comprehensive Plan, which envisions "Dynamic parks shape city character and meet diverse community needs";

RESOLVED, That the Board of Commissioners supports the BPO's general design direction related to floodplain impacts, existing trails in Wirth Park, and the Olson Memorial Highway trees, provided MPRB staff continue to be directly involved in the design process for these considerations;

RESOLVED, That the Board of Commissioners request continued collaboration between MPRB and BPO staff related to right-of-way impacts and compensation, wetlands and water quality, potential reconstruction of bridges near and within Wirth Park, and a park and ride at the

proposed Golden Valley Road Station, with recognition that these considerations require further design exploration, negotiation, and/or due diligence;

RESOLVED, That the Board of Commissioners recommend that the Plymouth Avenue Station, the Golden Valley Road Station, connections to area parks and trails near the Golden Valley Road and Plymouth Avenue stations, and the reconstruction of the intersection of Golden Valley Road and Theodore Wirth Parkway be included in the final project scope and budget, with the understanding that these four considerations are critical elements of the project that connect the regional transportation system with the regional park system;

RESOLVED, That the BPO shall use all practical methods to achieve safe co-location of freight and light rail;

RESOLVED, That nothing in this resolution shall be understood to abdicate MPRB's interest in nor responsibility for aspects of the project that affect, impact, or benefit the Minneapolis park system; and

RESOLVED, That the President of the Board and Secretary to the Board are authorized to take all necessary administrative actions to implement this resolution.

TO: Minneapolis Park and Recreation Board

FROM: Michael Schroeder,

DATE: November 4, 2015

SUBJECT: Resolution Stating Specific Positions of the Minneapolis Park and Recreation Board Related to the Blue Line Light Rail Transit Extension

BACKGROUND

This action requests that the Board of Commissioners state specific positions relative to the Blue Line Light Rail Extension Project (BLRT) also known as the Bottineau Line. The resolution suggests three general categories of topics: those on which there is general agreement between the Bottineau Project Office (BPO) and the Minneapolis Park and Recreation Board (MPRB), those on which the MPRB does not have enough information to take a position, and those which MPRB wishes to see included in the project scope and budget. The resolution being presented is based on a staff-led Board of Commissioners discussion on October 7, 2015.

Project Summary and Process

The planned Bottineau light rail transit (BLRT) project will operate about 13 miles northwest from downtown Minneapolis through north Minneapolis, Golden Valley, Robbinsdale, Crystal and Brooklyn Park, drawing riders northwest of Brooklyn Park. The proposed alignment will have 10 or 11 new stations in addition to Target Field Station where it will continue as the METRO Blue Line, providing one-seat rides to Minneapolis-St. Paul International Airport and the Mall of America. It will connect Minneapolis and the region's northwest communities with existing LRT on the METRO Green Line, future LRT on the METRO Green Line Extension (Southwest LRT), bus rapid transit on the METRO Red Line, the Northstar commuter rail line, and local and express bus routes.

The line has potential impacts and benefits to lands and assets owned and operated by the Minneapolis Park and Recreation Board (MPRB). It will utilize an existing rail line that passes adjacent to and between parcels of Theodore Wirth Regional Park and Glenwood Terrace Park. It may provide direct station access to Wirth Park. It will also run in the median of Highway 55 (Olson Memorial Highway), which is home to MPRB-maintained trees.

According to the terms of the Memorandum of Understanding (MOU) between the Metropolitan Council and the Minneapolis Park and Recreation Board (MPRB), MPRB "May take a resolution indicating its position on the project scope and budget." Such official stance is to occur prior to the Corridor Management Committee's (CMC) vote on the revised project scope

and budget, prior to the municipal consent process, and prior to issuance of the final Environmental Impact Statement.

Staff from the Bottineau Project Office (BPO) have been undertaking proper due diligence on this requirement by presenting to the Board of Commissioners on three separate occasions throughout 2015. In addition, MPRB staff, Commissioners, and members of the general public have been participating in the design process to date, including:

- Regular staff attendance at bi-weekly Golden Valley Issue Resolution Team (IRT) meetings and Parks IRT meetings (another input method called for in the MOU)
- Occasional staff attendance at bi-weekly Minneapolis IRT meetings
- Commissioner representation and staff attendance at monthly Corridor Management Committee meetings
- Monthly BPO and MPRB staff meetings held at MPRB offices
- Staff review of draft station area planning documents (this is a separate project run by Hennepin County)
- Direct coordination between BPO and MPRB staff as needed relative to permitting, understanding of land ownership, and other planning and design considerations
- Two appointments to the Community Advisory Committee for the Bottineau Line

The CMC's scope and budget vote is set to occur on November 12.

Resolution Format

Throughout 2015, MPRB staff and commissioners have been made aware of and have discussed a variety of concept design considerations related to the BLRT project and MPRB properties and assets. In many cases, Commissioners have already made their concern and/or support clear. In addition, MPRB's official comments on the Draft Environmental Impact Statement (DEIS) still have standing and are being carefully considered by the BPO.

The following is a list of topics that have been raised in Board presentations, at IRT meetings, or in the DEIS. These topics fall into three general categories, each of which has its own "RESOLVED" clause in the resolution:

- **RESOLVED, That the Board of Commissioners support the BPO's general design direction** means that, though ongoing coordination during detailed design and engineering will be necessary, the MPRB and BPO are in general agreement about the way forward on these topics.
- **RESOLVED, That the Board of Commissioners request continued collaboration** means that MPRB does not have enough information to be comfortable with current direction, or that not enough design exploration or negotiation has taken place to warrant either general alignment or a position.

- **RESOLVED, That the Board of Commissioners recommend inclusion in the final project scope and budget** includes those items for which there has been no final resolution and on which MPRB wishes to make a guiding recommendation.

Two additional "RESOLVED" clauses are included to ensure continued basic due diligence around safety and environmental review.

It is important to remember that this resolution is not the last time the MPRB Commissioners will have the opportunity to officially weigh in on the project. This action would provide specific guidance to BPO staff and the CMC when making their final project scope and budget decision.

Topic Summaries

Support for general design direction

For topics in this category, it shall be considered a foregone conclusion that design collaboration between BPO and MPRB staff will continue. BPO has stressed that this will be the case throughout detailed design. That collaboration should extend to MPRB staff having a seat at the table during design discussions, not merely an after-the-fact review capacity.

- *Floodplain Impacts* (Attachment A). It has been shown that floodplain impacts can be mitigated by grading within Wirth Park in an area that does not currently have significant active recreational use. MPRB staff will continue to work with the BPO on the exact shape and impact of this grading and on routing of an existing trail in this vicinity. In addition, conversations will continue to ensure BLRT construction does not exacerbate flooding issues in the vicinity and to consider whether additional storage might be provided to mitigate existing flooding.
- *The Trail in Wirth Park* (Attachment B). The trail that runs east of Basset Creek under the Plymouth Avenue Bridge will be impacted by construction. The BPO has indicated that this trail would be reconstructed on MPRB property for the entire length that it currently runs on railroad land. In addition, modifications to the Plymouth Avenue Bridge would shift the creek channel slightly west to allow for a standard trail width to pass under the bridge adjacent to the creek.
- *Highway 55 Trees.* More than 120 trees exist in the Highway 55 median. These are part of a University of Minnesota study on disease resistant elms. All of these trees must be removed to accommodate the center-running light rail line. The BPO has met with MPRB foresters and the U of MN researchers to discuss these impacts and has indicated they would work with MPRB to relocate trees to the extent feasible.

Request for continued collaboration

For topics in this category, MPRB will require further design exploration, negotiation, information, or due diligence. Topics in this category are not to be considered closed discussions. Rather they are ones on which significant discussion remains.

- *Right-of-Way and Compensation* (Attachment F). Though the BPO has to date been careful to understand MPRB ownership near the corridor and to minimize park land impacts, the discussion of whether and to what degree the MPRB will cooperate in land transfer must continue. Without more specific details on proposed compensation or continued discussion of parkland benefits, it is premature to make any decision on transfer of parkland.
- T*he Golden Valley Road Station Park and Ride* (Attachment G). MPRB Staff have worked with the BPO to consider the option of a park-and-ride at the Golden Valley Station on Park Board property in the interest of project due diligence. The BPO understands the difficulty of acquiring park land for parking. However, the creation a regional trail hub (as described above) with associated parking could provide benefit to park users, allowing for a shared-use situation. Few details of the financial realities of this proposal are known and it is therefore premature to take a position on the possibility or design of a park-and-ride area. It should be noted that a park-and-ride area was included in the concepts arising from the Bottineau Design Charette, though that facility was a structure with a park on top, while the current proposal is for a surface lot.
- *Wetlands and Water Quality*. At the last update to the Board, wetlands delineation and impact determination was underway. Without additional information, MPRB cannot know if impacts and mitigation proposals are generally in line with MPRB desires.
- *Coordination with Railroad, including potential bridge reconstructions*. This is perhaps the greatest unknown in the project at the moment. It is apparently possible that BNSF Railroad will insist on preserving the ability to implement a second track in the corridor, which will require the reconstruction of not only the Plymouth Avenue Bridge, but also the Theodore Wirth Parkway and Golden Valley Road Bridges. The actual parkland impact of these reconstructions is unknown.

<u>Inclusion in the final project scope and budget</u>

For topics in this category, MPRB may wish to make a specific recommendation to BPO and the CMC on items not yet resolved.

- *Stations* (Attachment C). The Draft Environmental Impact Statement proposed the Golden Valley Road Station with a possible second station at Plymouth Avenue. The Plymouth Avenue Station provides direct access to Wirth Regional Park and, as such, is a key inter-modal transfer point. Part of the power of regional transportation systems comes when they connect places not only where people live and work, but also where they play. Failing to connect to Wirth Park at Plymouth Avenue will seem a failure to interconnect some of the region's most important amenities. In addition, failure to implement the Plymouth Avenue Station will bring Wirth Park all the effects with none of the benefit.
- *Trail Connections*. In addition to implementation of the Plymouth Avenue Station itself, trail connections beyond those committed to thus far are also critical. MPRB staff and staff from other agencies have regularly expressed the desire to see more robust trail

connections. Specific suggestions from the MPRB, Golden Valley, and Three Rivers Park District include

- a direct connection across Bassett Creek near the Plymouth Avenue Station, which would link the north-south park trail with the station (Attachment D).
- direct connections between the existing trail along Theodore Wirth Parkway, the proposed Bassett Creek Regional Trail that would run along Golden Valley Road, and they new jointly managed Sochacki Park north of Golden Valley Road. Such a connection would require some additional trail and possibly an underpass of Golden Valley Road, but would create a multi-city multi-modal hub (Attachment E).

- *Golden Valley Road / Theodore Wirth Parkway Intersection***.** This intersection lies just north of the proposed Golden Valley Station and will be significantly impacted by transit operations. Whether the GVR Station is home to a passenger drop-off or park-and-ride, car and bus interconnections will likely increase as a direct result of light rail implementation. In addition, this already difficult free-right-dominated intersection will be used more frequently by pedestrians accessing the station. MPRB and the City of Golden Valley have discussed reconstruction of this intersection with the BPO but have received no commitment. This intersection could be considered a project cost not unlike other safety improvements adjacent to the line in other locations.

RECOMMENDATION

Staff recommends that the Board of Commissioners take specific positions on behalf of the Minneapolis Park and Recreation Board related to the Blue Line Light Rail Transit Extension, as articulated above and tabulated in the resolution.

ATTACHMENTS:

- A-Floodplains (PDF)
- B-Wirth Park Trail (PDF)
- C-Stations (PDF)
- D-TrailConnect-Plymouth (JPG)
- E-TrailConnect-GoldenValley (JPG)
- F-Right-of-way Impacts (PDF)
- G-GVR Park-and-Ride (PDF)

Prepared By: Adam Arvidson, Manager of Public Engagement & Citywide Planning, Strategic Planning
Review:

Cindy Anderson	Completed	10/22/2015 12:20 PM
Adam Arvidson	Completed	10/22/2015 12:26 PM
Michael Schroeder	Completed	10/22/2015 2:56 PM

Jayne Miller Completed 10/24/2015 8:00 PM
Minneapolis Park and Recreation Board Pending 11/04/2015 5:00 PM

MOTION TO RECOMMEND THE FOLLOWING 14 ACTIONS TO PROVIDE MITIGATION AND EQUITABLE COMPENSATION FOR THE TEMPORARY OCCUPANCY OF SOCHACKI PARK FOR CONSTRUCTION STAGING:

1) Removal of existing vegetation as agreed to by BPO staff and JPA staff within the restoration zone, defined as A) the southern construction staging area, and B) the northern staging area (*See Map Attachment A*), blending into the adjacent disturbed areas in the NE quadrant of the park.

2) Removal and disposal of all surface rubble within the restoration zone, in accordance with MPCA permitting requirements.

3) Addition of clean fill and top soil in the restoration zone in accordance with MPCA permitting requirements and consistent with the re-use of this area as guided by stakeholders.

4) Development and implementation of a revegetation plan approved by the JPA staff. The plan will address all areas disturbed by construction activities, including secondary construction activities in the BNSF right-of-way such as moving the Xcel power lines. In addition, the plan will identify practicable additional thickening of the vegetative buffer such as plantings of evergreen trees between the Park and the LRT Corridor for the purposes of reducing visual impacts of the LRT on Park visitors.

5) In the southern staging area, N. Rice Lake water edge restoration work and vegetation plantings to provide learning opportunities for park users (design and species TBD).

6) Restoration of the existing paved interior road to provide for safe two way traffic.

7) Removal or replacement of the northern parking lot to be determined in consultation with JPA staff.

8) Reconstruction and expansion of the interior paved parking lot (exact site TBD in consultation with JPA staff), to include room for a school bus turnaround.

9) Clearing, revegetation and fencing of an area immediately east and north of the interior parking lot within the northern staging area for future use as a dog off leash area.

10) Providing practicable utility services to a site adjacent to the interior parking lot for future development of a bathroom/storm shelter, and drinking water fountain.

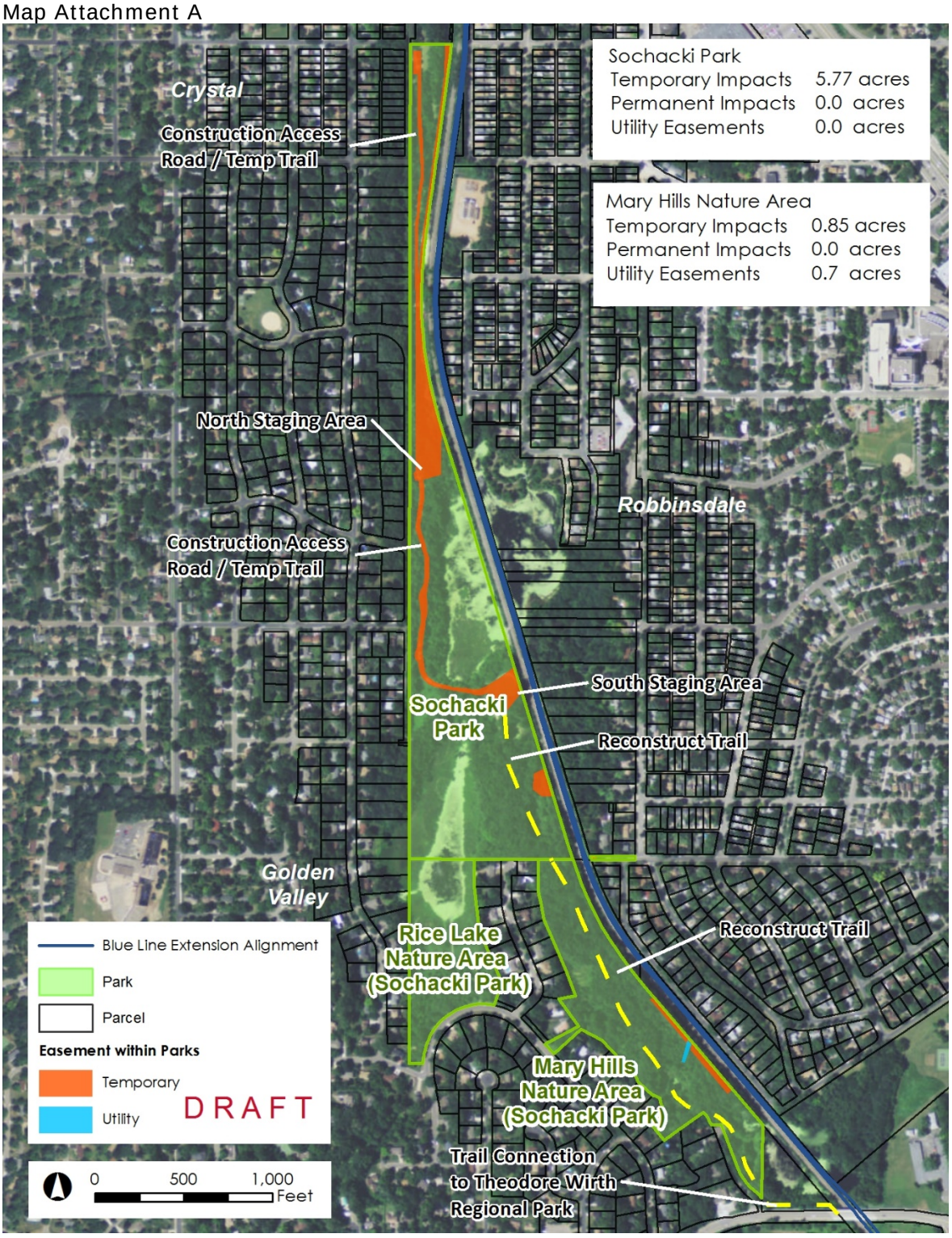
11) Ground preparation for a future education shelter sized for 50 students in a location TBD.

12) Construction of a water education platform on N Rice Lake

13) Redevelopment of a safe 10-foot wide paved trail through the length of the park, running from the northern entrance to the current trail terminus by Bonnie Lane; with restoration along the trail edge as needed.

14) Construction of an off-road trail connection from the existing terminus of the Sochacki Park trail at Bonnie Lane, crossing underneath the reconstructed Golden Valley Road Bridge and connecting to the existing trail in Theodore Wirth Regional Park.

Map Attachment A



U.S. Department
of Transportation
Federal Transit Administration

REGION V
Illinois, Indiana,
Michigan, Minnesota,
Ohio, Wisconsin

200 West Adams Street
Suite 320
Chicago, IL 60606-5253
312-353-2789
312-886-0351 (fax)

April 22, 2016

Roger A. Knowlton, Acting Chief
National Park Service
Recreation Grants Division
601 Riverfront Drive
Omaha, NE 68102-4226

Re: Invitation to Become a Cooperating Agency for the METRO Blue Line Extension Project in Minneapolis, Minnesota

Dear Mr. Knowlton:

The Federal Transit Administration (FTA) and the Metropolitan Council (Council) are preparing a Final Environmental Impact Statement (Final EIS) for the METRO Blue Line Extension Light Rail (BLRT Extension) project. Federal funding will be pursued for this project from FTA. As a result, as the lead federal agency for the project, FTA is required to undertake environmental review in compliance with the National Environmental Policy Act (NEPA). 42 USC §§ 4321-4370(h). As the local public agency sponsoring the project, the Metropolitan Council must also comply with the requirements of the Minnesota Environmental Policy Act (MEPA).

The BLRT Extension project is located in Hennepin County, Minnesota, extending approximately 13 miles northwest from downtown Minneapolis, serving north Minneapolis and the suburbs of Golden Valley, Robbinsdale, Crystal, and Brooklyn Park. The BLRT Extension project is anticipated to serve a broader area to the northwest, including the communities of New Hope, Brooklyn Center, Maple Grove, Osseo, Champlin, and Dayton.

During the environmental review process, FTA and the Council determined that, as proposed, the BLRT Extension project will impact park property purchased using Section 6(f)(3) funds. Because your agency has jurisdiction and expertise with respect to Section 6(f)(3) of the Land and Water Conservation Fund (LWCF) Act of 1965 (Public Law 88-578), we are inviting your agency to be a Cooperating Agency for the NEPA environmental review process for the BLRT Extension project. This is in accordance with the Council on Environmental Quality's Regulations for implementing the procedural provisions of NEPA (40 CFR Part 1501.6).

By becoming a Cooperating Agency, we invite the National Park Service to become more directly involved in the development of the BLRT project in the following ways:

1. Provide timely review and written comment as the Final EIS and other project documents are developed;
2. Participate in coordination meetings, conference calls, and join field reviews, as appropriate; and

3. Pursuant to 40 CFR Part 1506.3, the National Park Service may adopt without re-circulating the Final EIS when, after an independent review, the National Park Service concludes that its comments and suggestions have been satisfied.

To either accept or decline this invitation, please respond to Reggie Arkell at reginald.arkell@dot.gov in writing prior to Friday, May 6, 2016. If your agency chooses to decline the invitation, and does not intend to use the environmental review process to meet any regulatory or statutory requirement to make a determination on the affected park property, FTA respectfully requests that this declaration be made in writing.

If you have questions or would like to discuss the project, please contact Maya Sarna at (202) 366-5811 or maya.sarna@dot.gov.

Sincerely,

Marisol R. Simón
Regional Administrator

ec: Reggie Arkell, Federal Transit Administration
Maya Sarna, Federal Transit Administration
Kathryn O'Brien, Metropolitan Council

United States Department of the Interior
National Park Service
Midwest Region
601 Riverfront Drive
Omaha Nebraska 68102-4226

MAY 0 2 2016

Ms. Marisol R. Simon
U.S. Department of Transportation
Federal Transit Administration, Region V
200 West Adams Street, Suite 320
Chicago, IL 60606-5253

Dear Ms. Simon:

Thank you for your April 22, 2016 letter inviting the National Park Service (NPS) to participate as a cooperating agency with the Federal Transit Administration (FTA) and the Metropolitan Council (Council) as you prepare for a Final Environmental Impact Statement (Final EIS) for the METRO Blue Line Extension Light Rail (BLRT Extension) project located in Hennepin County, Minnesota. The Recreation Grants Division, Midwest Region of the NPS, accepts your invitation as a cooperating agency, in a limited capacity, within the provisions of the Land and Water Conservation Fund (LWCF) program as it relates to LWCF grant #27-01087, June Park, (Sochacki Park / Sochacki Management Unit).

We look forward to working with you. If you have any questions, please contact me at (402) 661-1558 or roger_knowlton@nps.gov.

Sincerely,

Roger A. Knowlton

Roger A. Knowlton
Acting, Chief
Recreation Grants Division

TAKE PRIDE® IN AMERICA

U.S. Department
of Transportation
Federal Transit Administration

REGION V
Illinois, Indiana,
Michigan, Minnesota,
Ohio, Wisconsin

200 West Adams Street
Suite 320
Chicago, IL 60606-5253
312-353-2789
312-886-0351 (fax)

May 18, 2016

Director, Office of Environmental Policy and Compliance
U.S. Department of the Interior
1849 C Street, NW (MS 2462-MIB)
Washington, DC 20240

RE: Section 4(f) Submission for the METRO Blue Line Extension Project in Hennepin County, Minnesota

Dear Ms. Braegelmann:

The Federal Transit Administration (FTA) and the Metropolitan Council (Council) are preparing a Final Environmental Impact Statement (Final EIS) for the proposed METRO Blue Line Extension Light Rail (BLRT Extension) project. The Council is pursuing Federal funding for this project from FTA. As the lead federal agency for the project, FTA is required to undertake environmental review in compliance with the National Environmental Policy Act (NEPA), 42 USC §§ 4321-4370(h). The Final FEIS being prepared includes an Amended Draft Section 4(f) evaluation in accordance with the Department of Transportation Act of 1966 and 23 CFR Part 774.

The proposed BLRT Extension project is located in Hennepin County, Minnesota, extending approximately 13 miles northwest from downtown Minneapolis, serving north Minneapolis and the suburbs of Golden Valley, Robbinsdale, Crystal, and Brooklyn Park. The proposed BLRT Extension project is anticipated to serve a broader area to the northwest, including the communities of New Hope, Brooklyn Center, Maple Grove, Osseo, Champlin, and Dayton.

Pursuant to 23 CFR § 774.5, FTA is providing the enclosed BLRT Extension project Amended Draft Section 4(f) and 6(f) Evaluation to the Department of Interior for review and comment. FTA is kindly requesting a written response by **Tuesday, July 5, 2015**. If comments are not received within this period, FTA will assume a lack of objection and proceed with the action. Please direct any questions to Reggie Arkell of the FTA Regional Office at 312-886-3704 or reginald.arkell@dot.gov. Thank you very much for your assistance.

Sincerely,

Marisol R. Simon,
Regional Administrator

Enclosure: METRO Blue Line Extension Project Amended Draft Section 4(f) and 6(f) Evaluation

ec: Reggie Arkell, FTA
Kathryn O'Brien, Metropolitan Council

United States Department of the Interior
National Park Service
Midwest Region
601 Riverfront Drive
Omaha Nebraska 68102-4226

27-01087(MWR-LCPPG)

June 9, 2016

BLRT FEIS: Amended Draft 4(f)/6(f) Evaluation
ER-14/0235R: Metro Blue Line Light Rail Transit Extension (previously Bottineau Extension)

The Recreation Grants Division, Midwest Region of the NPS, accepted the Federal Transit Administration (FTA) and the Metropolitan Council's (Council) invitation to become a cooperating agency, in a limited capacity, within the provisions of the Land and Water Conservation Fund (LWCF) program as it relates to LWCF grant #27-01087, June Park, (Sochacki Park / Sochacki Management Unit). We have reviewed the sections of the FEIS that pertain to the proposed conversion of the Land and Water Conservation Fund (LWCF) Section 6(f)(3) property, Sochacki Park: Sochacki Management Unit.

We agree that use of the park for a period of longer than 6 months constitutes a conversion.
We agree that all practical alternatives have been evaluated and considered.
We agree with the proposed conversion requirements.

Once the conversion has been approved by National Park Service (NPS), replacement property should be immediately acquired and developed according to the replacement proposal timetable. If development will be delayed beyond three years from the date of NPS conversion approval, then a request for delayed development beyond three years with a justification for the delay must be made to NPS.

Exceptions to the immediate replacement requirement will be allowed only when it is not possible for replacement property to be identified prior to the State's request for the conversion.

An express commitment must be received from the State to satisfy Section 6(f)(3) substitution requirements within a specified period normally not to exceed one year following conversion approval.

We agree that following construction, the park property would be restored and enhanced, and would remain under the ownership and control of the city of Robbinsdale and the JPA partners.

We recommend you consult directly with the official who administers the LWCF program in the State of Minnesota as the project moves forward to determine any potential conflicts with Section 6(f)(3) of the LWCF Act (Public Law 88-578, as amended).

The administrator for the LWCF program in Minnesota is Mr. Joe Hiller, Park Grants Coordinator, 500 Lafayette Road, St. Paul, MN 55155-4039

We appreciate the opportunity to provide these comments.

Sincerely,

Roger Knowlton
Acting Chief, Recreation Grants Division

From:	O"Brien, Kathryn
To:	Reed, Scott; BPODMC; Miller, Caroline
Subject:	FW: BLRT Meeting Cancelled
Date:	Friday, June 17, 2016 11:28:46 AM

From: Hiller, Joe H (DNR) [mailto:Joe.Hiller@state.mn.us]
Sent: Friday, June 17, 2016 11:19 AM
To: O'Brien, Kathryn <kathryn.obrien@metrotransit.org>
Subject: RE: BLRT Meeting Cancelled

Kathryn,

I concur with the evaluation of the 0.01-acre impact to Golden Valley's Glenview Terrace Park described in the Amended Draft Section 4(f) and 6(f) Evaluation dated May 2016. All practical alternatives were evaluated and rejected on a sound basis, the construction activities will not diminish outdoor recreation opportunities at the park, and the addition of nearby recreation facilities including the new trailhead with wayfinding signage will improve access to this park.

In 1977, the City and the State signed the Outdoor Recreation Agreement OR77A-29 Glenview Terrace and Sheid Park Tennis Courts to develop recreation facilities at Glenview Terrace Park. In consideration for receiving State funds, the City agreed that it "shall not at any time convert any property developed pursuant to this agreement to uses other than the public outdoor recreation uses specified in the project proposal attached, hereto, without the prior written approval of the Director (now the MN Dept. of Natural Resources)." The MN Department of Natural Resources approves this proposal to convert 0.01-acres to non-recreation use and accepts, as mitigation, the proposed nearby recreation improvements. The State and the City will amend their agreement to reflect this conversion.

Joe Hiller
Park Grant Coordinator
MN Dept. of Natural Resources, Division of Parks and Trails
651-259-5538
Joe.hiller@state.mn.us
500 Lafayette Road, St. Paul, MN 55155-4039

[redacted]

United States Department of the Interior
Office of the Secretary
Washington, D.C. 20240

9043.1
PEP/NRM

JUN 2 8 2016

ER-14/0235

Ms. Marisol Simon, Region V
Regional Administrator
Federal Transit Administration
200 West Adams Street, Suite 320
Chicago, Illinois 60606

Dear Ms. Simon:

As requested, the Department of the Interior (Department) has reviewed the Amended Section 4(f) and 6(f) Evaluations for the Final Environmental Impact Statement (FEIS) for the Metro Blue Line Light Rail Extension (formerly Bottineau Transitway), Hennepin County, Minnesota. The Department offers the following comments and recommendations for your consideration.

Section 4(f) Comments

The Federal Transit Administration (FTA), along with the Metropolitan Council (Council), proposes the construction and operation of the Metro Blue Line Light Rail Extension. The project would consist of a light rail transit (LRT) system extension of approximately 13 miles from downtown Minneapolis to the northwest suburbs. The draft Section 4(f) evaluation in 2014 identified several properties in the project study area eligible to be considered under Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. §303). The Department reviewed the draft evaluation at that time and found the analysis preliminary and impacts to eligible resources not evaluated fully. The Department concurred that there were no feasible or prudent avoidance alternatives to the preferred alternative presented which would result in impacts to a park/recreational resource, Theodore Wirth Regional Park, but determined that additional design information was needed for all other properties.

The current evaluation now considers the potential impacts to 29 eligible properties, including 12 park/recreation properties and 17 historic properties (eligible for or listed on the National Register of Historic Places) from the project now known as the METRO Blue Line LRT Extension (BLRT) project. This evaluation by the FTA has determined that the BLRT project would not use lands from five of the park/recreation properties and 15 of the historic properties. In addition, the FTA has determined that, of the remaining seven park/recreation properties, five would only have temporary occupancy (no permanent use of the park or recreation facility land) and two would be subject to an insignificant amount of use (*de minimis*). This determination means that none of the park/recreation properties would be used by the BLRT project. The Department does not have a review role in the determination of *de minimis* use, but we will note it would appear that negotiations are still underway with the officials with jurisdiction over these properties. The FTA may not use a *de minimis* use determination unless the officials with

jurisdiction agree. Finally, the project would result in adverse effects to the two or three remaining historic properties (the Grand Rounds Historic District, and the Osseo Branch of the St. Paul, Minneapolis and Manitoba Railway Historic District) and to the values for which they were determined to be eligible.

Impacts to the Grand Rounds Historic District, a nationally significant example of urban park development, will come from the need to construct new track, realign the existing BNSF Railway freight track, bridge reconstruction, corridor protection barriers between the two tracks, and construction of passenger stations. In sum, all of these actions will permanently use 0.7 acre from the Theodore Wirth Parkway, which is a contributing element to the Grand Rounds Historic District. All other impacts would be to non-contributing elements and an existing transportation corridor. As avoidance alternatives, the FTA considered two alignment shifts (east and west) and a tunnel option to avoid affecting the historic property; these avoidance alternatives were deemed feasible but not prudent due to other impacts to surrounding residential and business areas.

The impacts to the Osseo Branch, part of the St. Paul, Minneapolis and Manitoba Railway Historic District, would come from the need to use a portion of the Osseo Branch right-of-way that is 100 feet wide and approximately 13 miles long. The Osseo Branch portion of the Historic District preserves a portion of the early historic rail development of the Minneapolis–St. Paul area, which provided an economic outlet for products from potato farmers in Hennepin County. The BLRT project would use the easternmost 50 feet of that right-of-way for a distance of eight miles for the track, and the additional 50 feet for temporary construction easements during construction along the eight miles. The construction easements would require the project to move the existing BNSF Railway track that occupies that portion of the original right-of-way approximately 15 to 25 feet to the west. Many of the same avoidance alternatives proposed for the Grand Rounds Historic District were applied to the Osseo Branch, and found to be feasible but not prudent.

The Department would concur with the FTA that there are no feasible or prudent avoidance alternatives to the preferred alternative presented, which results in impacts to the Grand Rounds Historic District and the Osseo Branch. The evaluation demonstrates that efforts were made to avoid impacts to Section 4(f) resources and to find ways to reduce the severity of the impacts in consultation with the State Historic Preservation Officer and other consulting parties. However, the Department cannot concur that all possible planning needed to minimize harm to Section 4(f) resources has been employed since there is not an executed agreement document to provide a finalized set of mitigation actions for those historic properties. The Department will withhold its final concurrence until there is evidence of a signed agreement. We would also prefer to see evidence that the affected owners have agreed to the *de minimis* determinations for their properties.

Section 6(f) Comments

The National Park Service's (NPS) Recreation Grants Division, Midwest Region, accepted the invitation offered by the FTA and the Council to become a cooperating agency in a limited capacity, within the provisions of the Land and Water Conservation Fund (LWCF) program as it relates to LWCF grant #27-01087, June Park (Sochacki Park/Sochacki Management Unit). The NPS has reviewed the sections of the FEIS that pertain to the proposed conversion of this

property in accordance with the provisions of Section 6(f)(3) of the Land and Water Conservation Fund Act (Public Law 88-578, as amended).

The NPS agrees that use of the park for a period of longer than six months constitutes a conversion. We agree that all practical alternatives were evaluated and considered, and we agree with the proposed conversion requirements.

Once the conversion has been approved by the NPS, replacement property should be immediately acquired and developed according to the replacement proposal timetable. If development will be delayed beyond three years from the date of the NPS conversion approval, then a request for delayed development beyond three years must be made to the NPS with a justification for the delay. Exceptions to the immediate replacement requirement will be allowed only when it is not possible for replacement property to be identified prior to the State of Minnesota's request for the conversion. An express commitment must be received from the State to satisfy the Section 6(f)(3) substitution requirements within a specified period normally not to exceed one year following the conversion approval. The NPS agrees that following construction, the park property should be restored and enhanced, and would remain under the ownership and control of the City of Robbinsdale, as well as the Three Rivers Park District and the City of Golden Valley who are part of a Joint Powers Agreement with the City of Robbinsdale to manage the property.

The NPS recommends you consult directly with the official who administers the LWCF program in the State of Minnesota as the project moves forward to determine any potential conflicts with Section 6(f)(3) of the LWCF Act. The administrator for the LWCF program in Minnesota is Mr. Joe Hiller, Park Grants Coordinator, 500 Lafayette Road, St. Paul, Minnesota 55155-4039.

The Department has a continuing interest in working with the FTA to ensure impacts to resources of concern to the Department are adequately addressed. For continued consultation and coordination with the issues concerning historic resources identified as Section 4(f) resources, please contact Regional Environmental Coordinator Nick Chevance, Midwest Regional Office, National Park Service, 601 Riverfront Drive, Omaha, Nebraska 68102, telephone 402-661-1844. For questions or concerns related to Section 6(f) properties, please contact Acting Chief Roger Knowlton, Recreation Grants Division, at the same address, telephone 402-661-1558.

We appreciate the opportunity to provide these comments.

Sincerely,

for Mary Josie Blanchard
Acting Director, Office of Environmental
Policy and Compliance

cc: marisol.simon@dot.gov

TRANSMITTED ELECTRONICALLY – NO HARD COPY TO FOLLOW

Appendix J
Section 4(f)/6(f) Supporting Materials

J.2 General Coordination with Park Stakeholders through Parks Issue Resolution Team (IRT) Meetings

1. Proposed BLRT Extension project Parks IRT Meeting notes, April 28, 2015
2. Proposed BLRT Extension project Parks IRT Meeting notes, May 26, 2015
3. Proposed BLRT Extension project Parks IRT Meeting notes, June 23, 2015
4. Proposed BLRT Extension project Parks IRT Meeting notes, August 25, 2015
5. Proposed BLRT Extension project Parks IRT Meeting notes, November 5, 2015
6. Proposed BLRT Extension project Parks IRT Meeting notes, November 13, 2015
7. Proposed BLRT Extension project Parks IRT Meeting notes, December 9, 2015
8. Proposed BLRT Extension project Parks IRT Meeting notes, January 14, 2016
9. Proposed BLRT Extension project Parks IRT Meeting notes, January 27, 2016

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Meeting Summary

METRO Blue Line LRT Extension (BLRT)
5514 West Broadway Avenue, Suite 200, Crystal, MN 55428 www.bluelineext.org

Meeting Title: Parks Coordination Meeting

Date:	4/28/15	**Time:**	3:30 PM	**Duration:**	1.0 hour
Location:	Blue Line Project Office				
Meeting called by:	Kathryn O'Brien				
Attendees:	Per meeting invite				
Purpose of Meeting:	Parks Coordination on Blue Line LRT Extension – Floodplains Impacts Golden Valley/Robbinsdale				

Meeting Summary (summary information presented in *italics)*

1) Introductions
2) Floodplains
   a) Initial assessment of impacts (Golden Valley/Robbinsdale)
3) Floodplain mitigation opportunities
   a) Locations
   b) Current uses
   c) Future plans / improvements
4) Next Coordination Meeting

- *Kathryn O'Brien opened the meeting after introductions. The purpose of the Parks Issue Resolution Team (IRT) meetings is to focus on the Blue Line LRT Extension (BLRT) project and potential impacts to park resources. The BLRT team has met several times already with the Minneapolis Park and Recreation Board (MPRB) staff, has also met with the Three Rivers Park District (TRPD), and is regularly meeting with the cities along the corridor. The establishment of the Parks IRT meetings formalizes the coordination efforts regarding potential park impacts, and meets the requirements of the Memorandum of Understanding (MOU) executed by Met Council and the MPRB.*
- *O'Brien noted that the focus of the meeting today is floodplains, and turned the meeting over to Lisa Goddard (SRF).*
- *Goddard reviewed the FEMA flood mapping for two areas of the BLRT corridor along the BNSF right of way: 1) Between TH 55 and Golden Valley Road (south reach), and; 2) Between Golden Valley Road and 36th Street (north reach). The south reach segment includes potential impacts to Theodore Wirth Regional Park (TWRP), while the north reach includes potential impacts to Sochacki Park.*

- *Rick Birno noted that Sochacki Park is now the name for the combined park resources of Sochacki Park in Robbinsdale, and the Mary Hills and Rice Lake Nature Areas in Golden Valley. This consolidation is an outcome of the joint powers agreement between the cities of Golden Valley and Robbinsdale, and the TRPD.*
- *Goddard reviewed the requirements for compensatory floodplain storage, specifically the requirement that to be counted as storage, the area excavated must be above the water table but below the 100 year flood elevation and hydraulically connected to the impacted floodplain*
- *The preliminary impacts identified in the south reach were discussed. Approximately 12,000 cubic yards of floodplain impact are anticipated between TH 55 and Golden Valley Road – the northern extent of impacts is actually only a few hundred feet north of Plymouth Avenue.*
- *A knob of comparatively higher ground just north of TH 55 and west of the BNSF was mentioned as a possible mitigation site. The site is comprised of a combination of MPRB property and Canadian Pacific Railway property. It appears that all of the needed compensatory storage could be obtained at this site; however, the site would likely need to be contoured and replanted with trees to create a floodplain forest setting similar to the surround area.*
- *The BLRT team is also exploring the potential for creating compensatory floodplain storage through the MPRB's plans for reconstruction of some of their golf holes.*
- *Cliff Swenson asked about how the floodplain impacts were calculated. Goddard indicated that the team cut cross-sections along the alignment, and matched those against the floodplain elevation and existing ground surface to determine the floodplain fill volume. The cross sections included the freight rail reconstruction, the light rail line, and the light rail stations. Goddard and O'Brien noted that there was no difference in floodplain impact whether the Plymouth Avenue Station was included or not included – the impact is on the west side of the alignment and dictated by where the freight rail would need to go. There is no floodplain impact from the proposed Golden Valley Road Station.*
- *Goddard discussed the potential floodplain impacts in the Grimes Pond/North Rice Pond area. The BLRT team is still looking at various engineering options in this area; the soils are poor quality for construction purposes, and various combinations of filling and spanning the pond area are being considered. Calculations yield floodplain impacts ranging from 7,500 to 10,000 cubic yards in this area. Calculations were done using a likely worst-case scenario of retained fill the full length of the alignment in the pond.*
- *The connectivity of Grimes Pond and North Rice Pond was discussed. Currently there are two culverts connecting the two ponds. The northern culvert is set at a lower elevation, and is often blocked by beaver activity. The southern culvert is at a higher elevation.*
- *Flooding in the area was discussed. The eastern extent of the floodplain intersects private parcels, and in some cases, homes. There has been historical flooding in this area.*
- *Potential flood mitigation areas were presented. The western edge of North Rice Pond could be regarded to create additional storage, but would remove existing vegetation adjacent to the pond. Some storage could be obtained at the south end of North Rice Pond as well. The southeastern portion of Grimes Pond, and a portion of the eastern bank of Grimes Pond could also potentially provide some mitigation. The northern end of Grimes Pond includes a capped contaminated site, so no mitigation would be considered there.*
- *Plans for Sochacki Park were discussed, especially in consideration of the potential floodplain mitigation. Ann Rexine noted that survey work is being conducted in preparation for paving the existing gravel trail in Sochacki Park. Birno noted that several improvements are included in park plans, such as off-leash*

dog park areas and natural play areas, along with plans to improve water quality, manage vegetation, and provide educational experiences.

- *Rexine noted that water quality improvements could be difficult in Sochacki Park considering the extent of the watershed that feeds the park area.*
- *There was a general discussion of the costs and benefits from floodplain mitigation on the west side of North Rice Pond. On the positive side, the mitigation effort could include demolition debris cleanup (the park contains demo debris dumped in the 50s-70s), elimination of nuisance and invasive species, and improvements to access and views of the pond, as well as providing the necessary floodplain and wetland mitigation for the BLRT impacts. Drawbacks include the fact that the park is a 6(f) resource (obtained/improved with LAWCON funds) and would require extensive coordination with the DNR and National Park Service, the potential for asbestos or other problem contaminants in the demo debris, the public perception of the removal of trees and other greenery (regardless of whether it is considered a nuisance or invasive species), and the fact that the cost of such a mitigation plan could be well in excess of what the BLRT project could afford.*
- *Birno noted that whatever plan is carried forward, it should minimize impacts on residents and recreational space.*
- *Rexine agreed to share the Sochacki Park trail survey data and park plan information with the BLRT team.*
- *O'Brien mentioned that the creation of park amenities through the floodplain mitigation process needs to be considered as an option for both potential floodplain and park impacts.*
- *There was general discussion of the private parcels that comprise the southern portion of Grimes Pond – these are very long residential lots that extend from France Avenue on the east side all the way to the BNSF right of way. The homes on these parcels are located near France Avenue, and are 60-80 feet higher in elevation than Grimes Pond. The parcels are generally heavily wooded. Floodplain mitigation may be an option on these parcels.*
- *Swenson asked about the deadline for determining the floodplain mitigation plan. O'Brien noted that options can be carried forward through the Final EIS and Record of Decision (ROD), with final details determined during detailed design efforts post-ROD.*
- *The next meeting will focus on trails and connectivity of park resources to other parks, the surrounding communities, and transportation facilities.*

Meeting Summary

METRO Blue Line LRT Extension (BLRT)
5514 West Broadway Avenue, Suite 200, Crystal, MN 55428 www.bluelineext.org

Meeting Title: Parks Coordination Meeting

Date:	5/26/15	**Time:**	3:30 PM	**Duration:**	1.0 hour
Location:	Blue Line Project Office				
Meeting called by:	Kathryn O'Brien				
Attendees:	See attached sign-in sheet				
Purpose of Meeting:	Parks Coordination on Blue Line LRT Extension – Trails Discussion				

Discussion Topics

Summary information presented in *italics*.

1) Introductions

- *Attendance was limited for this meeting; non-BPO representatives included Tom Marshall of the City of Robbinsdale, and Adam Arvidson and Cliff Swenson of the Minneapolis Park and Recreation Board. Therefore, discussion focused primarily on the Theodore Wirth Regional Park Trail that runs parallel to the BNSF line and passes beneath the Plymouth Avenue Bridge.*

2) Bassett Creek Trail (at GVR Station)

- *This item was tabled, and will be addressed at the next meeting when City of Golden Valley and Three Rivers Park District staff can participate.*

3) TWRP Trail (at Plymouth Avenue Station)

- *The issue of the trail paralleling the BNSF corridor was discussed. The portion of the trail beneath Plymouth Avenue and extending to the south for some distance is on BNSF right of way. The Minneapolis Park and Recreation Board (MPRB) is working with BNSF to establish an official permit for the trail to continue to exist on BNSF property.*
- *The MPRB considers this trail to be an important connection within the Theodore Wirth Regional Park trail system. Therefore the MPRB needs this connection to be maintained after BLRT is constructed.*
- *It was noted that the trail was damaged during the tornado in 2011, and is in need of repair/resurfacing.*
- *Options for reconstructing the trail were discussed. The BLRT project section includes the construction of two LRT tracks in the eastern 50 feet of BNSF right of way, and the reconstruction of the freight rail track, along with a service road, in the western 50 feet of BNSF right of way. Because of the location of Bassett Creek to the west of the trail, there is very little room for the trail after BLRT is constructed. Approximately 8 feet would be left between the new Plymouth Avenue bridge pier and the service road. It is likely that not all of this would be available for trail, as BNSF may want a fence or other buffer between the trail and the service road. Therefore, two options for reconstructing the trail which include shifting Bassett Creek to the west were discussed. One option would involve reconstructing the existing*

concrete creek passage (which is approximately 18 feet wide) under the bridge in a location several feet to the west. Another option would also move the creek to the west, but would provide a wider, more natural creek section.

- *The possibility of building two trail bridges over Bassett Creek that would move the trail out of the BNSF corridor under Plymouth Avenue was discussed. MPRB staff expressed concern about the maintenance of such bridges, and the addition of a circuitous route element to a relatively straight trail.*
- *MPRB staff noted that there are definite benefits to moving the trail entirely out of BNSF right of way.*
- *Trail connections were discussed.*

4) Crystal Lake Regional Trail (at 73rd Avenue Station)

- *This item was tabled, and will be addressed at the next meeting when City of Brooklyn Park and Three Rivers Park District staff can participate.*

5) Next Coordination Meeting

- *The next meeting is tentatively scheduled for 3:30-4:30 PM on June 23rd at BPO. BPO will send out an invite and agenda prior to the meeting.*

Meeting Summary

METRO Blue Line LRT Extension (BLRT)
5514 West Broadway Avenue, Suite 200, Crystal, MN 55428 www.bluelineext.org

Meeting Title: Parks Coordination Meeting

Date:	6/23/15	**Time:**	3:30 PM	**Duration:**	1.0 hour
Location:	Blue Line Project Office				
Meeting called by:	Kathryn O'Brien				
Attendees:	Per meeting invite				
Purpose of Meeting:	Parks Coordination on Blue Line LRT Extension – Trail Impact / Hwy. 55 Trees				

Discussion Topics

1) Introductions

- *Attendance included Tom Marshall of the City of Robbinsdale, Adam Arvidson of the Minneapolis Park and Recreation Board, Ann Rexine of Three Rivers Park District, Rick Birno of the City of Golden Valley. BPO staff included Tom Harrington, Rob Hume, Kathryn O'Brien, Shelley Miller, Scott Reed, and Caroline Miller.*

2) Hwy. 55 Median Trees

- *This item was tabled. BPO staff have been working to make contact with the principal investigator of the U of M tree research study.*

3) TWRP Trail (at Plymouth Avenue Station)

- *The group reviewed the three options for aligning Bassett Creek, the trail, LRT, and freight beneath the Plymouth Avenue Bridge. This exhibit was shown at the last Parks IRT meeting. Adam Arvidson noted that Option 3 appears to have impacts (e.g. a longer bridge) that don't necessarily justify the naturalization of the creek for a short distance. Adam recommended further study of Option 2, which moves the trail out of BNSF right of way. Option 2 also has Plymouth Avenue Bridge approximately within the same footprint as the existing bridge today.*

4) Bassett Creek Regional Trail (GVR Station)

- *Two concepts of the Bassett Creek Regional Trail at Golden Valley Station were shown. Concept A routes the trail on the south side of Golden Valley road, between the vertical circulation from the station and the crosswalk to access the sidewalk, bus connections, passenger drop off, and the surface parking lot (shown on the north side of Golden Valley Road). A conflict point where the trail meets the vertical*

circulation/station exit point was noted. Concept B depicted the trail south of the vertical circulation area at the station, avoiding this conflict. The trail would need to be on fill or structure. Fill would impact a large area or require a retaining wall; the structure option would essentially be a small bridge supporting the trail next to the vertical circulation.

- *Ann Rexine noted that the trail is not currently funded or programmed. However, she would like to discuss the timing of building the trail to minimize the number of times the roadway needs to be under construction.*
- *Ann and Rick Birno commented on the value of Concept B and specifically for residents at Courage Kenny Institute. Adam Arvidson agreed that Concept B is the better option for a recreational user of the park and trail. MPRB is looking for the best solution for recreation, even if that may mean additional use of parkland.*
- *Kathryn O'Brien noted that Concept B will be more expensive than Concept A and that costs above the BLRT project scope will likely need to be part of the trail project.*

5) Crystal Lake Regional Trail

- *The trail extends along the east side CSAH 81 in the project area. It has been constructed south of 73rd Avenue, and will be extended north of 73rd Avenue when that segment of CSAH 81 is reconstructed.*
- *The location where the trail will cross the LRT tracks is not perpendicular; BPO is looking at the appropriate safety measures to protect pedestrians and bicyclists.*
- *Ann brought up the Sochacki Park to Grand Rounds connection trail. This trail is likely out of scope for the BLRT project but its construction could be timed with construction of BLRT.*

6) Next Coordination Meeting

- *The next meeting will be scheduled in July at a 3pm time. The agenda will plan to cover potential Three Rivers Park District property impacts at the OMF site in Brooklyn Park.*

Meeting Summary

METRO Blue Line LRT Extension (BLRT)
5514 West Broadway Avenue, Suite 200, Crystal, MN 55428 www.bluelineext.org

Meeting Title: Parks Coordination Meeting

Date:	8/25/15	**Time:**	3:00 PM	**Duration:**	1.0 hour
Location:	Blue Line Project Office				
Meeting called by:	Kathryn O'Brien				
Attendees:	Per meeting invite				
Purpose of Meeting:	Parks Coordination on Blue Line LRT Extension – Sochacki Park and Related Items				

Discussion Topics

Summary information presented in *italics*.

1) Introductions
   - *Following introductions, Kathryn O'Brien indicated that the purpose of today's meeting is to further discuss Sochacki Park, and the need to consider construction access and construction material laydown areas in the park.*

2) Construction Access Limitations – BNSF Trench
   - *Jim Toulouse summarized the limitations for construction access in the BNSF trench area – especially between 36th Avenue and Golden Valley Road. With the decision being made to build a bridge across Grimes Pond, construction access and staging becomes even more of a critical issue. Access from locations outside the park were considered, but were generally topographically challenging (too steep), or would require the acquisition and demolition of residential homes. Since construction would be a 1-2 year event, the removal of homes was thought to be an unacceptable impact.*

3) Sochacki Park Options
   a) Potential Park Impacts
   b) Regulatory Requirements
      i) Section 4(f)
      ii) Section 6(f)
   - *Scott Reed noted that the joint powers agreement between Three Rivers Park District (TRPD), Robbinsdale, and Golden Valley treats Sochacki Park, Mary Hills Nature Area, and Rick Lake Nature Area as a single "new" Sochacki Park. However, only the original (Robbinsdale) Sochacki Park is subject to Section 6(f) requirements. If there were an actual land transfer that consolidated ownership of the three park units into a singly-owned park entity, then all three units could be considered the same Section 6(f) resource.*
   - *Reed presented the proposed Sochacki Park access scenario using three descriptive categories:*
     - *What would happen in the park?*

- *Construction access to the rail corridor and construction staging/laydown areas would be provided*
- *Met Council would obtain temporary easements for construction; fee title would remain with the City of Robbinsdale*
- *Met Council would work to maintain public access to portions of the park for recreational purposes*
- *A construction management plan would be developed to minimize impacts, maintain public access, and facilitate safety*
- *The park would be restored to pre-construction conditions, with the potential for some enhancements*

o *Section 4(f)*

- *Identified as a temporary occupancy in the Draft EIS/Draft Section 4(f) Evaluation*
- *To stay as a temporary occupancy, would need to avoid interference with the protected activities, features, or attributes of the property*
- *Could consider a full use determination to maintain flexibility during construction*
- *Document appropriately in Final EIS/Final Section 4(f) Evaluation*
- *Need Department of Interior approval*

o *Section 6(f)*

- *A portion of Sochacki Park was acquired using Land and Water Conservation Act funds (LWCF) in 1980*
- *MnDNR Park Grant funding obtained for park improvements in 1984*
- *Temporary non-conforming use under Section 6(f) would need to be 6 months or less*
- *Construction requirements necessitate presence in park for more than 6 months*
- *Would need to do a full conversion of the park*
- *Propose returning the park in a restored state as the mitigation for the Section 6(f) conversion*
- *Would document in a combined Section 4(f)/6(f) Evaluation*
- *Need MnDNR and National Park Service approval; would need to be coordinated with Section 4(f) approvals*

- *Rick Birno noted that Glenview Terrace Park and Mary Hills Nature Area are also grant-funded parks.*
- *Jonathan Vlaming (Three Rivers Park district) noted that a new trail has been planned in Sochacki Park that would pave over the existing gravel trail*
- *Ann noted that many of the potential lay down areas for construction staging on the handout are also prairie restoration areas.*

4) Water Resource Issues – Sochacki Park area
   - *The team reviewed the floodplain and wetland impacts that were identified early in the BLRT project development. The selection of a bridge option by BPO staff eliminates floodplain and wetland impacts, and provides an opportunity to improve flood storage and add wetland acreage through the removal of the existing rail embankment.*

5) Action Items
   - *Birno indicated that it would be good for BPO to do some additional analysis regarding specific access needs and then make a formal recommendation regarding Sochacki Park. Ann Rexine agreed.*

- *Birno, Rexine, and Tom Marshall all noted the importance of considering impacts to citizens; Marshall commented that there is quite a bit of sensitivity by the public regarding Sochacki Park.*
- *Rexine, Birno, and Marshall stated that from their perspective, they were not saying no to the access proposal, but that more discussion and review from the Joint Powers Board, the TRPD Board, and the city councils would be needed.*
- *O'Brien indicated that BPO will proceed on a parallel path – working with the local agencies to further discuss and refine the park access proposal; and working with the MnDNR and National Park Service on the regulatory approval process.*

6) Next Coordination Meeting
   - *To be determined.*

Meeting Summary

METRO Blue Line LRT Extension (BLRT)
5514 West Broadway Avenue, Suite 200, Crystal, MN 55428 www.bluelineext.org

Meeting Title: Parks Coordination Meeting

Date:	11/05/15	**Time:**	1:00 PM	**Duration:**	1.0 hour
Location:	Blue Line Project Office				
Meeting called by:	Kathryn O'Brien				
Attendees:	Ann Rexine (Three Rivers), Jonathan Vlaming (Three Rivers), Adam Arvidson (MPRB), Tom Marshall (Robbinsdale), Rick Birno (Golden Valley), Eric Eckman (Golden Valley), Emily Goellner (Golden Valley), Nadine Chalmers (Hennepin County), Scott Reed (BPO), Shelley Miller (BPO), Lisa Rasmussen (BPO), David Davies (BPO), Caroline Miller (BPO), Michael Jischke (BPO), Alicia Vap (BPO)				
Purpose of Meeting:	Parks Coordination on Blue Line LRT Extension – Trail connections, Golden Valley Road Station area				

Discussion Topics

1) Introductions

2) Trail connections around Golden Valley Road Station area
   - Kathryn O'Brien provided background information on the trail connection idea from Theodore Wirth Park into Sochacki Park. Lisa Rasmussen pulled up Adam Arvidson's graphic showing the concept of a trail running adjacent to the freight tracks. The objective of the meeting is to explore potential options for this trail connection and where it would go.
   - Lisa posed the question what type of trail is envisioned for this segment and who would be using the trail? Bicyclists? Jonathan Vlaming responded that he sees it as a segment for commuting use and for bicyclists to access the Golden Valley Road Station. Jonathan explained that the to connect the trail to Sochacki Park, a boardwalk could potentially be used over the ponds instead of wrapping around the steep hillside north of the Golden Valley Rd bridge. He also expressed that a mid-block crossing of the Bassett Creek Trail across Golden Valley Rd/Bonnie Lane to connect to Sochacki Park is undesirable from Three River's perspective. Three Rivers desires to create trails for all users, not just experienced bicyclists.
   - Alicia Vap noted that the process for determining the trail connection needs to be completed by Q1.
   - Lisa Rasmussen asked the group whether the trail should be a straight line, or more sinuous, both of which would create different user experiences. Lisa also asked about the placement of the trail and whether it should be higher up on the slope in the trees, or down below closer to the freight tracks. Adam responded that it would be good to have a more sinuous trail if there is room, but an exploration of the cost/benefit is needed. He also expressed that the trail should stay closer to the freight tracks to minimize the impact to trees and vegetation. Adam supports exploring the concept of the boardwalk as

well as the wall concept wrapping around the hillside and determining what are the costs and benefits of each.

- The group discussed the potential safety issue of the sharp curve north of the Golden Valley Rd bridge. BPO staff need to look into the requirements for a trail of this type.
- The group discussed that the standard for this trail would be a 10 ft combined bike/ped trail with striping down the middle. This is consistent with Three Rivers concept plan for the BCRT. Eric Eckman brought up the portion of the BCRT near Courage Center for discussion. He encouraged BPO staff to consider additional trail width for a separate ped trail per the BCRT feasibility study. This would allow users of Courage Center to more easily access the Golden Valley Rd station.

3) Action Items
   - Jonathan Vlaming's engineering staff will look at feasibility of doing a boardwalk after the bridge portal, as it enters Sochacki Park. He cited a recent project done in Nine Mile Creek (in Edina) where they eliminated wetland impacts through the use of piers for the boardwalk trail.
   - BPO staff will explore feasibility of the steep slope concept and the boardwalk concept (including consideration of floodplain and wetland impacts).

4) Next Coordination Meeting
   - No date was determined for the next Parks IRT as BPO staff need some time to advance concepts. BPO staff will schedule another meeting after the concepts are further fleshed out and Three Rivers staff have looked at preliminary feasibility.

Meeting Summary

METRO Blue Line LRT Extension (BLRT)
5514 West Broadway Avenue, Suite 200, Crystal, MN 55428 www.bluelineext.org

Meeting Title: Parks Coordination Meeting

Date:	11/13/15	**Time:**	11:30 AM	**Duration:**	1.0 hour
Location:	Blue Line Project Office				
Meeting called by:	Kathryn O'Brien				
Attendees:	Ann Rexine (Three Rivers), Jonathan Vlaming (Three Rivers), Tom Marshall (Robbinsdale), Rick Birno (Golden Valley), Rob Hume (BPO), David Davies (BPO), Caroline Miller (BPO), Scott Reed (BPO)				
Purpose of Meeting:	Parks Coordination on Blue Line LRT Extension – Sochacki Park				

Discussion Topics

1) Introductions

2) Discuss Nov 3 letter from Sochacki Park Joint Powers Partnership Partners
   - Kathryn asked for clarification regarding the decision making authority of the Joint Powers Partnership since City of Robbinsdale is the landowner. Jonathan stated that the Joint Powers Partnership respects the City of Robbinsdale's ownership of the property and as the decision-making body in construction issues in Sochacki Park, but would like their board to provide input and potentially take action.
   - The group discussed each numbered item from the November 3rd letter
   - Item 1: 4(f) documentation. Kathryn noted that as part of the project's 4(f) documentation, alternatives will be explored and documented. Jonathan stressed the importance of demonstrating to the public that we have looked at alternatives, and access through the park is the only viable option.
   - Item 2: Public Involvement on use of Sochacki Park during construction. The group discussed that this is a broader discussion that needs to include more staff from City of Robbinsdale as to nature of meetings and timing.
   - Item 3: Sochacki Park Concept Plan/Joint Powers Agreement purpose statement. Kathryn noted that project staff acknowledge the purpose statement.
   - Items 4 and 5: Construction staging areas and use of park by public during construction. Rob explained the need of the project to access both ends of the bridge through Grimes Pond for construction. Access to both ends allows the project to be more efficient in constructing the bridge.
     - *Tree Removal:* Rob clarified that in the BPO proposed scenario for construction staging, they made all attempts to avoid tree clearing and chose areas that appeared grassy/open. Tree quality was not considered. Tom and Rick clarified that the tree quality throughout the park is poor and some level of tree clearing for construction staging/access would be acceptable as a means of improving the quality of the park long term through replanting/restoration. Rick noted that no tree clearing should occur west of the current entrance road and trail, to maintain the

buffer between nearby homes and the park. Joint Powers staff agreed that a staging area to the north (as they indicated in their Nov 3 letter) would be ideal, even though it requires tree removal, as it minimizes travel throughout the park and could result in long term improved park quality.

- *Access through park + 1 staging area in north + interim trail:* After BPO established the need to access the park from both sides via a construction access road, the group discussed the option of an access road and a staging area at the north end (location as indicated in the Nov 3 letter). BPO staff agreed that a staging area to the north would be valuable and reduce construction traffic through the park. The interim trail would allow continued public use of park during periods of active construction.
- *Access through park + 2 staging areas + interim trail*: After discussion of multiple other options, the group agreed on this option as likely the best option for both parties to move forward with further coordination and input from the public. This option would allow north and south access via the construction access road, plus construction staging at both ends of the bridge. This would be the most beneficial option for construction efficiency. It would also facilitate environmental remediation and vegetative restoration of the laydown areas. This option also includes the interim trail that would keep the park open to users throughout construction.
- *Interim Trail:* Jonathan clarified the description of the interim trail from the Nov 3 letter. He explained that the construction access road and the interim trail would share the same corridor, separated by a construction fence. Rob noted that the construction access road would need at least 12 ft of useable width for a single lane and pullout spots at several locations for opposing trucks to pass. The group agreed that it could be feasible for a construction access road and an interim trail to share the same corridor. The group agreed that an 8 ft (nominal width) interim trail would be sufficient.

- Item 6: Environmental remediation. The group discussed that the BPO would be expected to conduct environmental remediation of demolition debris in areas that may be disturbed by the project. This would include the construction access road and staging areas. It was noted that the BLRT project could not be responsible for remediation of the entire site, but would address demolition debris at and near the ground surface in areas of disturbance. The group discussed the potential benefit to the park of two staging areas being used, in that as the project would be able to complete remediation on those areas.
- Item 7: Environmental mitigation. The project will comply with federal and state regulatory guidelines for mitigation of stormwater and floodplain and wetland impacts. The group did not discuss revegetation of the entire eastern boundary of Sochacki Park for a visual buffer. This is a topic the group will need to discuss at a future meeting. Scott explained that vegetation may be considered a buffer but that it does not mitigate noise. Additionally, Sochacki Park is considered an active use park and under FTA guidance it is not considered a noise sensitive land use.
- Item 8: Future enhancements to the park. Item a, regarding trail connections has been added to the project scope and cost estimate as of November 12. Jonathan stated that he and the Joint Powers staff need to explore the staging area restoration items under b and c. The project agrees that a paved road to the parking lot through the park will be completed as part of the construction access needs, and therefore would be a part of the park in the future. BPO staff indicated that items under d are not feasible under the current project scope and cost estimate because:
  - The current project plan is to maintain the existing BNSF Railway berm as the location of the BNSF track and as such removal of a portion of it is not feasible.

- Constructing a trail connection under both the existing BNSF and the proposed BLRT tracks would put the proposed trail at an elevation (after structure depth and vertical clearances) under the elevation of the water surface.

3) Action Items
   - Caroline explained that the Sochacki Park issues need to be discussed more widely with City of Robbinsdale staff
   - Joint Powers staff will work on providing additional detail to BPO staff about park enhancements as mitigation
   - BPO staff will update the construction staging graphic to reflect today's discussion
   - Visual buffer not discussed at this meeting. Need to discuss at next meeting.
   - Need to determine timing and scope of public outreach for this topic

4) Next Coordination Meeting
   - This topic will be discussed at an upcoming Robbinsdale IRT meeting
   - The group will reconvene to continue discussions on the action items above

Meeting Summary

METRO Blue Line LRT Extension (BLRT)
5514 West Broadway Avenue, Suite 200, Crystal, MN 55428 www.bluelineext.org

Meeting Title: Parks Coordination Meeting

Date:	12/09/15	**Time:**	2:30 PM	**Duration:**	1.5 hours
Location:	Blue Line Project Office, Conference Room 2				
Meeting called by:	Kathryn O'Brien				
Attendees:	Jonathan Vlaming (Three Rivers), Adam Arvidson (MPRB), Tom Marshall (Robbinsdale), Rick Birno (Golden Valley), Eric Eckman (Golden Valley), Emily Goellner (Golden Valley), Nadine Chalmers (Hennepin County), Scott Reed (BPO), Shelley Miller (BPO), Lisa Rasmussen (BPO), David Davies (BPO), Caroline Miller (BPO), Tom Harrington (BPO), Alicia Vap (BPO),				
Purpose of Meeting:	Parks Coordination on Blue Line LRT Extension – Trail connections, Golden Valley Road Station area				

Discussion Topics

1) Introductions

2) Trail Connection from Golden Valley Rd Station to Sochacki Park
   - Tom Harrington grounded the group describing the design challenges in choosing an alignment for the trail connecting Theodore Wirth Park with Sochacki Park. The main challenge is designing around the steep slope north of the Golden Valley Road bridge and maintaining a <5% grade.
   - Tom introduced two concepts that the BPO team has been working on since the last Parks IRT meeting. The first concept is a boardwalk style trail with wood piles that would run adjacent to the hillside slope and connect with Bonnie Lane. He referenced (and provided photographs of) an existing segment of the Luce Line in Golden Valley as an example of this type of construction. The second concept is an asphalt trail with retaining walls on the same alignment as the boardwalk concept. The retaining walls would be on the downslope side of the trail in in this concept.
   - The boardwalk concept would allow for vegetation beneath the piers, making the structure less visible. The retaining wall concept would have 10+ ft high walls in some portions, which would be much more visible than the boardwalk concept. Both concepts are ADA compliant.
   - Tom also acknowledged the concept that Three Rivers staff developed concurrently since the last Parks IRT. The Three Rivers concept also includes retaining walls, but they are located upslope in this concept. This concept has the trail alignment closer to the water than the BPO concepts. Jonathan Vlaming noted that this alignment follows an existing maintenance path.
   - Jonathan raised concerns about the user experience of the BPO concept trails. Since the trail would go adjacent to Bonnie Lane, many users may end up taking a shortcut across Golden Valley Road instead of using the trail. Keeping the trail away from the adjacent road would encourage users to stay on the trail and also have a better user experience by being further into the park.

- Adam Arvidson asked if there would be any gain in user experience in keeping the trail lower through the portal beneath Golden Valley Road bridge?
- Jonathan noted that a bridge over the water was initially dismissed in favor of an option on the slope that appeared to be less expensive. However, the retaining walls could prove to be expensive, so we should consider exploring the boardwalk across the water concept.
- The group discussed pavement versus wooden boardwalk options. The group agreed that pavement appears safer for this trail due to the curve north of the portal.

3) Trail connection to Plymouth Ave Station
    - Tom presented two concepts in response to MPRB's request for exploration of trail connection between the Theo Wirth Trail adjacent to Bassett Creek and the Plymouth Avenue Station. The trail connection would be intended for users on the trail coming from the south and exiting the trail to access the vertical circulation building on Plymouth Avenue.
    - One concept had retaining walls and the other concept had wooden piers with a boardwalk. It was noted that the retaining walls would be prominent/tall due to the steep slope. Both concepts are ADA compliant.
    - Adam noted that he needs to take some time to study the concept to provide more feedback.

4) Hwy 55/BNSF area
    - Tom showed a graphic providing clarity on the construction limits on the trail adjacent to Bassett Creek, between Plymouth Ave and TH 55. The trail construction limits to the south would end at the edge of the CP boundary. Adam acknowledged that this was his understanding.

5) Action Items
    - BPO staff will explore refining the current concepts to see if the portal can be lowered and retaining walls can be minimized
    - BPO staff will also explore an option for at trail over the wetland area.
    - BPO staff will work on costs for the different options to compare
    - Adam will provide feedback on the Plymouth Ave trail connection option presented.

6) Next Coordination Meeting

Meeting Summary

METRO Blue Line LRT Extension (BLRT)
5514 West Broadway Avenue, Suite 200, Crystal, MN 55428 www.bluelineext.org

Meeting Title: Parks Coordination Meeting

Date:	1/15/16	**Time:**	10:00 AM	**Duration:**	1.5 hours
Location:	Blue Line Project Office, Conference Room 2				
Meeting called by:	Kathryn O'Brien				
Attendees:	Jonathan Vlaming (Three Rivers), Tom Marshall (Robbinsdale), Rick Birno (Golden Valley), Caroline Miller (BPO), Marcia Glick (Robbinsdale)				
Purpose of Meeting:	Parks Coordination on Blue Line LRT Extension – Sochacki Park Resolution				

Discussion Topics

1) Introductions
2) Sochacki Park Resolution
   - Following the 12/28 Joint Powers Agreement board meeting, the JPA staff revised the Sochacki Park Resolution (JPA board is comprised of Three Rivers Park District, City of Golden Valley and City of Robbinsdale elected officials).
   - Prior to the meeting the JPA staff sent BPO the revised draft of the Sochacki Park Resolution
   - The meeting was spent going through each item on the revised draft of the resolution
   - The discussion of the policies/principles of the proposed JPA board resolution focused around editorial changes and restructuring a few of the policies to make a more concise action.
   - The only substantive change in the policy/principles section was to remove language about noise barriers in the park since noise impacts are addressed through the NEPA process in coordination with local jurisdictions. Language about providing vegetative buffers as a visual screen was left in the resolution under the revegetation plan.
   - The group spent the majority of the meeting discussing the actions for mitigation in the resolution
   - The group agreed upon language about following MPCA permitting requirements for addressing soil contamination in the restoration zone
   - BPO asked for clarification on the scope and location of the N. Rice Lake water edge restoration work. JPA staff responded that location is adjacent to southern staging area, but outside of it. Harden the edge to the water to allow for park users to access. Requires some tree removal and revegetation. Maybe some large boulders would be added.
   - BPO asked for clarification regarding providing utilities to a future site adjacent to the interior parking lot. Group agreed to leave in language about providing all practicable utility services with details to be worked out after the resolution is passed. There are challenges with bringing in sewer service. Water service is easier.

- BPO asked for clarification regarding ground prep for a future education shelter for 50 students. JPA staff responded that the site would be approximately 30 x 30 ft within the proposed staging area and would be used for day camps.
- BPO asked for clarification regarding width of restored road into park. JPA staff responded that this would need to be wide enough to accommodate a bus passing a car.
- The group discussed the paved trail restoration throughout the park and JPA staff clarified that the resolution states that BPO would reconstruct the entire trail through Sochacki and the Mary Hills portion of the park. BPO noted that they did not previously understand reconstruction of the Mary Hills 8-ft trail portion from the Robbinsdale/Golden Valley border to Bonnie Lane to be a part of the resolution. BPO agreed to include it in the scope of the resolution.
- The group discussed the drawbacks to considering a trail spur from the north/south trail to Culver Rd. It may lead to increased parking and traffic on Culver Road and outreach to residents there should be considered prior to including in the resolution. Rick Birno noted that he will provide this information to the Golden Valley Open Space committee during a meeting on 1/25. He will follow up with the group on this item after meeting with the Open Space Committee.
- The group agreed to generalize language about BPO's commitment to revegetation of disturbed areas and incorporate into the policies/principles on page 1, number 5.
- BPO asked for clarification on scope of water education platform construction on North Rice Lake. JPA staff responded that it will be approximately 20 x 10 ft and floating on water. The exact location is TBD.

3) Next Coordination Meeting
   - After discussing all of the items in the resolution and reaching agreement, BPO staff agreed to send their proposed edits reflecting this discussion to the JPA staff for review and finalization. The resolution will be on the 2/8 agenda for the JPA Board meeting.

Meeting Summary

METRO Blue Line LRT Extension (BLRT)
5514 West Broadway Avenue, Suite 200, Crystal, MN 55428 www.bluelineext.org

Meeting Title: Parks Coordination Meeting

Date:	1/27/16	**Time:**	2:30 PM	**Duration:**	1.5 hours
Location:	Blue Line Project Office, Conference Room 2				
Meeting called by:	Kathryn O'Brien				
Attendees:	Ann Rexine (Three Rivers), Jonathan Vlaming (Three Rivers), Adam Arvidson (MPRB), Tom Marshall (Robbinsdale), Rick Birno (Golden Valley), Eric Eckman (Golden Valley), Emily Goellner (Golden Valley), Nadine Chalmers (Hennepin County), Scott Reed (BPO), Shelley Miller (BPO), Lisa Rasmussen (BPO), Rob Hume (BPO), Sophia Ginis (BPO), David Davies (BPO), Caroline Miller (BPO)				
Purpose of Meeting:	Parks Coordination on Blue Line LRT Extension				

Discussion Topics

1) Introductions

2) Trail Connection from Golden Valley Rd Station to Sochacki Park
   - Tom Harrington described the proposed trail connection from Theodore Wirth Park to Sochacki Park. He mentioned that this has been introduced in a previous Golden Valley DRT. Caroline Miller noted that this was shared with the Sochacki Parks JPA staff briefly at a meeting as well.
   - The revised trail design minimizes retaining walls and incorporates input from Three Rivers' initial design concept that was shared with BPO staff. The concept also keeps the trail close to the water without going into a delineated wetland.
   - Eric Eckman noted that the Bassett Creek watershed typically requires a vegetative buffer between the edge of the wetland and new construction. It's something to keep in mind since the trail is very close to the delineated wetland. Golden Valley is supportive of this concept, just make sure to balance the impacts (wetland, floodplain).
   - Ann Rexine stated that Three Rivers is in favor of this concept

3) Trail connection to Plymouth Ave Station
   - Tom Harrington began this discussion by recapping previous trail connection concepts that have been discussed in previous DRT's and Parks DRT's. A trail with retaining walls on both sides as well as a trail with grading out on both sides were shown to the Parks IRT group in the last meeting. While the concepts serve the objective of a trail connection to the station, they are creating more impacts in terms of visual and floodplains.
   - Tom introduced the newest concept which is a staircase on the north side of Plymouth Avenue and west side of Bassett Creek, with a small bridge across the creek, connecting to the TWRP trail. This

concept is less visually impactful as the stairs are gradual and tucked in close to the Plymouth Avenue Bridge.

- Eric Eckman asked about floodplain impacts with this concept in terms of height constriction by the proposed trail bridge over the creek. BPO staff responded that Bassett Creek is currently in a channel beneath Plymouth Avenue and will be in a channel after it is relocated as part of the project. The stairs concept minimizes floodplain impacts compared to the previous concepts, but we haven't calculated specifics yet. BPO wanted to get feedback and agreement on the general concept before proceeding with more analysis and refinement.
- Adam Arvidson was supportive of this concept and noted that a few commissioners were also supportive. He appreciated how it has less of a visual impact from the Chalet and appears to be tucked into the bridge.
- Kathryn explained that while BPO proposes to build this staircase, the Met Council would not own or maintain the project element. This particular area has complicated landownership with a mix of MPRB, Golden Valley and Minneapolis. Further discussions are needed with these stakeholders to determine who will own and maintain it.

4) Xylon Avenue (Brooklyn Park)
   - Tom explained the trail concept for a trail to extend on the west side of Xylon Avenue adjacent to the OMF. The trail is proposed in the existing ROW, with temporary occupancy of Three Rivers Park District property for tying in grades along the ¼ mile segment.
   - Ann explained that Three Rivers would like to see visual impacts from the OMF mitigated through lighting and vegetative buffers. Kathryn responded that the OMF will be designed in accordance with Brooklyn Park city ordinances and that BPO will continue to coordinate with Three Rivers and Brooklyn Park on the design.
   - Todd introduced the idea of a meandering trail through the park property instead of adjacent to Xylon. Kathryn responded that if Three Rivers and Brooklyn Park would like to go that route it would not be included as part of the LRT project.

5) Action Items

6) Next Coordination Meeting

   - The group discussed Sochacki Park for a few minutes at the end of the meeting. Eric Eckman provided an update on Rick Birno's presentation to the Golden Valley Open Space committee. He noted that visual quality for park users adjacent to the LRT continues to be of importance to Golden Valley and they would like a vegetative buffer on the eastern edge of the park.
   - Tom Marshall provided an update on the Robbinsdale open space committee.

Appendix J
Section 4(f)/6(f) Supporting Materials

J.3 Other Supporting Materials

1. *Deep Bore Tunnel Analysis Technical Memorandum*
2. *Deep Tunnel Map Book*
3. *Alignment Shift Map Book*

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Deep Bore Tunnel Analysis Technical Memorandum

METRO Blue Line LRT Extension (BLRT)
5514 West Broadway Avenue, Suite 200, Crystal, MN 55428 www.bluelineext.org

Deep Bore Tunnel Analysis

To: Paul Danielson

From: Betty White

Rob Hume

Date: 04-19-2016

Subject: Deep Bore Tunnel Under BNSF's Monticello Subdivision

Introduction

As an alternative to constructing an at-grade light-rail transit (LRT) system within the BNSF Railway's Monticello Subdivision, a deep tunnel concept was explored that would construct the LRT utilizing two parallel round tunnels. Due to the length of this segment, approximately eight miles, it is assumed that the tunnels would be bored using a tunnel boring machine (TBM). This Technical Memorandum provides an overview of a deep tunnel concept and the associated order of magnitude costs.

In addition, a relative unit cost comparison was prepared for a shallow cut and cover LRT tunnel versus BLRT construction at grade for the Alignment Shift Avoidance Option.

Concept Design

The deep tunnel concept is defined as a subterranean light rail system (mainline and stations) that follows the BNSF Railway alignment underground from its crossing of Olson Memorial Highway (TH 55), located in Minneapolis, in the south to the proximity of 73rd Avenue, located in Brooklyn Park, in the north.

The intent of the deep tunnel concept is to plan and design the tunnel system to avoid permanent surface features that change (impact) the existing BNSF Railway corridor. To achieve this, the tunnel will need to enter and exit the BNSF Railway right-of-way (ROW) underground. In addition, all stations and tunnel support systems (ventilation) will need to be located outside the BNSF Railway ROW with subterranean access to and from the LRT system as required.

The deep tunnel concept would include the following core elements:

i. Tunnel Boring
The LRT's inbound and outbound tracks would be accommodated within two parallel precast concrete tunnels with an estimated inside diameter of 20 feet. The tunnels would be constructed utilizing a TBM. Existing soils in the southern half of the tunnel's alignment include peat and soft organic clays to an average depth of approximately 50 feet, with depths as great as 95 feet in some areas. In these areas, it is anticipated that the tunnel would be bored below these deposits at an estimated depth of 120 – 130 feet below the existing surface. Within the northern portion of the tunnel the soils are shallower resulting in an approximate tunnel depth of 70 – 80 feet below the existing surface elevation. It is assumed that a single TBM would bore the first tunnel in one direction and then be reconfigured to bore the second tunnel in the opposite direction.

ii. Bore Pits
To assemble and align the TBM, as well as to service tunneling operations (remove spoil and deliver tunnel panels), tunnel bore pits would be built to the north and south of the useable tunnel segments. A portion of sacrificial tunnel would be built to get the TBM between the bore pit and the useable tunnel. These large, open, temporary pits (approximately 500 feet long by 60 feet wide by 130 feet deep at the southern end and 80 feet deep at the northern end) would be constructed from the surface at a location that can be sustained for the duration of planned tunneling operations (and then removed). The location of the pits will by necessity (the TBM has a very large diameter-turning radius and so cannot deviate much from the planned alignment) be near the BNSF Railway and may require a temporary relocation and/or additional structural support of the existing freight tracks. In addition, the bore pits will require heavy-duty access to a large public roadway for delivery of the TBM segments and other tunneling materials. The tunnels will require a significant temporary power supply to operate the TBM, tunnel ventilation and other associated processes.

iii. Portals
The LRT tunnels will join the surface via a portal at either end of the operating tunnel segments. The portal accommodates the ramping of the track from the surface grade to a depth of adequate cover to accommodate the tunnel – this length is approximately 400 feet. The location of the portals are generally defined by the point at which the tunnel's profile grade intercepts existing ground. Within the portal the light rail grade would be increased to the design criteria maximum of 6%. On the south end of the tunnels the portal would be located starting at Newton Avenue and on the north at Jolly Lane.

iv. Approach Tunnels
To interconnect the portals and the bored tunnels requires curving approach tunnels that accommodate the planned LRT alignment from TH55 into the BNSF Railway ROW and from the BNSF Railway ROW into the West Broadway alignment. The curvature of these approach tunnels is tighter than achievable with a TBM and thus would be constructed using a cut and cover method. The southern approach tunnel would be approximately 2,500 feet in length and would be located within poor soils including peat and soft organic clays to an average depth of approximately 100 feet, likely requiring cofferdam type construction. The northern approach tunnel would be approximately 1,500 feet in length.

v. Stations
To accommodate the planned LRT stations, the two parallel tunnels need to be united with an underground station cavity. In order to avoid extensive impacts to the operating BNSF Railway, the station cavity would likely need to be excavated using tunneling technics. This would require at least one large shaft to the surface for the duration of construction activities, constructing heavy-duty access to the shaft for the delivery of station materials and a temporary electrical service. In addition to the station, lateral shafts would need to be tunneled from the LRT tunnels to the location of the passenger vertical circulation facility. To avoid permanent impacts to the BNSF Railway, the vertical circulation facility would be on purchased property outside the BNSF Railway ROW.

vi. Other items
In addition to the tunnels and passenger accommodations, the tunnel requires emergency egress facilities, mechanical systems for the removal of carry in and nuisance water, a system to accommodate piston effect air movement, and ventilation (operational and emergency). The tunnel will also include electrical and communications system elements.

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Order of Magnitude Cost Estimate

Deep Tunnel

An order of magnitude cost estimate has been created for this design concept. The mainline tunnel cost was developed using the Southwest Light Rail Transit (SWLRT) design concept of utilizing deep bore tunnels under the Kenilworth Channel.

The cost estimate includes boring for dual parallel tunnels 20 feet in diameter each and located 25 feet on center for a length of 40,700 feet. A difficulty factor of 3 was used to account for construction in the soft soils (non-rock) present under the BNSF corridor. Entrance and exit portals, two TBM pits, and cut and cover approach tunnels are also included in the costs.

The Plymouth and Golden Valley stations will be deep underground stations because of the deeper tunnel depth in this area. The Penn Avenue, Robbinsdale, Bass Lake Road and 63rd Avenue stations would be shallower.

Temporary railroad support is included to represent the costs to support the existing BNSF Railway track located adjacent to the TBM pits at either end of the tunnel construction. A cost is also included to provide temporary electrical service to each of the TBM pits.

ROW will be required for the TBM pit locations (temporary occupancy), the station vertical circulation locations, and the ventilation system buildings.

The order of magnitude project cost for this tunnel system would be expected to be in the range of $5 billion to $7 billion. This cost is for the defined tunnel system and not the adjacent project elements connecting to the BLRT tunnel.

Shallow Tunnel Cost Comparison

A relative order of magnitude unit cost comparison was developed for the Alignment Shift Avoidance Option to contrast:

- a shallow cut-and-cover LRT tunnel to the east of the BNSF Railway utilizing the alignment of the Xerxes Avenue North, versus
- the costs developed for the BLRT construction at grade (Municipal Consent level of design)

The shallow tunnel unit cost was derived from work done for the SWLRT tunnel (west) cost estimating with the addition of costs for residential property acquisitions (total take and owner relocation) along Xerxes Avenue North. The cost of the shallow tunnel LRT is approximately $250 million per mile. This is the unit cost to construct a subsurface guideway and does not include stations.

For comparison purposes, the unit cost to construct the BLRT in the vicinity of the Alignment Shift Avoidance Option is approximately $125 million per mile. This is the unit cost to construct the guideway (which requires relocation of the BNSF Railway) and does not include stations.

Other Considerations Related to TBM

i. Availability of the TBM at the time they are required to be on site as well as means of delivery for the several hundred ton TBM will need to be determined. Definition of dismantled TBM and maximum loads for transport need to be investigated. The route will require further investigation including capacity of local roads and bridges. Haul routes need to be defined and reviewed. Width and turning radius to access the tunnel site will need to be determined along with overhead clearance requirements during the delivery of tunneling machine and equipment.

ii. The construction footprint for this tunneling operation will be very large and will control all of the activities in the construction zone. Our research estimates 1 -2 acres for each tunnel drive entrance. The area will require room for the TBM pit as well as the following:
   1. Construction Trailers
   2. Crew Parking/ Off Site Shuttle
   3. Loader/Trucks/Rail Cars – Tunnel Excavation Spoil Removal
   4. Excavation Conveyor Belt System
   5. Tunnel Precast Segmental Panels
   6. Generators
   7. Light Plants
   8. Utilities
      a. Ventilation
      b. Water Supply
      c. Wastewater Removal
      d. Power Supply
   9. Crane(s)

iii. Excavated material may be required to be hauled at all hours of the day and night to maintain continuous tunneling operations.

iv. Available power required to perform tunnel boring operations will need to be investigated.

v. Tunneling operations generally require (2) ten hour shifts per day. Time restrictions will need to be investigated based on the possible need for continuous tunneling operations.

vi. TBMs are expensive and most contractors want to have a very efficient operation to get the TBM in and off the site as soon as possible.

vii. Our research shows that TBM stoppages and/or breakdowns are common and can have a major impact on schedule if the machine needs major repair or replacement. Availability of parts and access to the TBM creates problems.

viii. The level of vibration and settlement will need to be researched and determined prior to starting construction operations. Vibration and settlement limits will need to be established. Monitoring systems may be required to record operations. This will require a specialty contractor that would likely need to be hired by the general contractor in most cases. Ground surface and local building monitoring would also be required.

ix. The possibility of interested tunneling contractors is a real concern. The project may be reduced to one interested contractor. Special insurance riders, additional risk, and higher liability will be the result to the general contractors, as they will not be performing this scope of work.

x. The TBM operation will or can certainly be critical path on this very large project with possible impact to both civil contracts and the systems contract. High liquidated damages will be required in the contract to motivate the contractor to maintain schedule milestones, substantial completion, and completion. This may be an important factor and concern of the contractor during bidding.

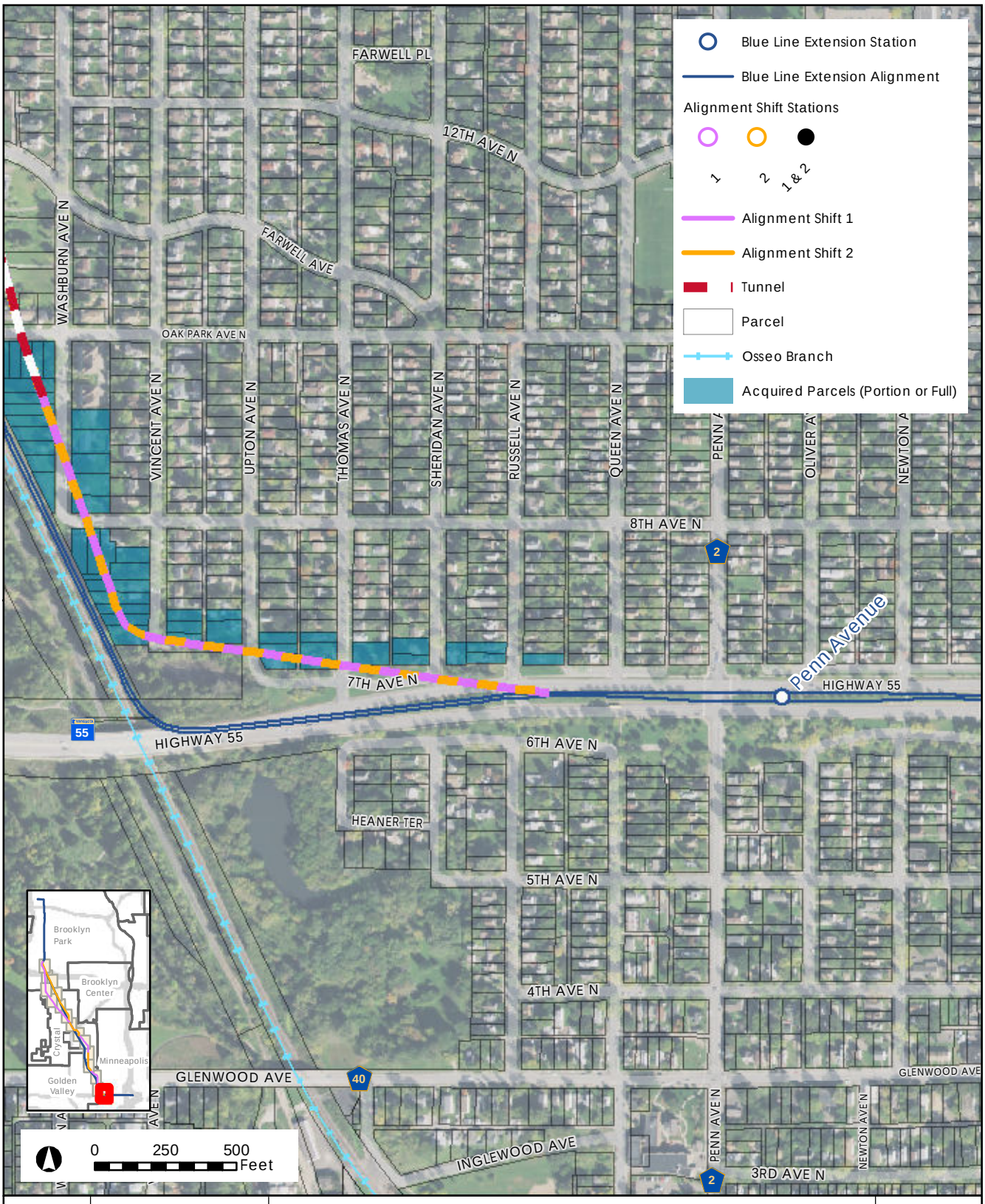
xi. The level of geotechnical investigation required to plan the borings greatly exceeds the currently available subsurface data and the potential contractors may request additional information be provided by the owner. This could delay the bidding process.

xii. Because of the high cost to operate the TBM, construction claims related to cost and schedule could be higher.

xiii. The cost contingency on the project would likely need to be increased due to the anticipated influence of TBM operations.

xiv. Minnesota winter conditions could complicate the belt or slurry paste excavation removal.

Deep Tunnel Map Book



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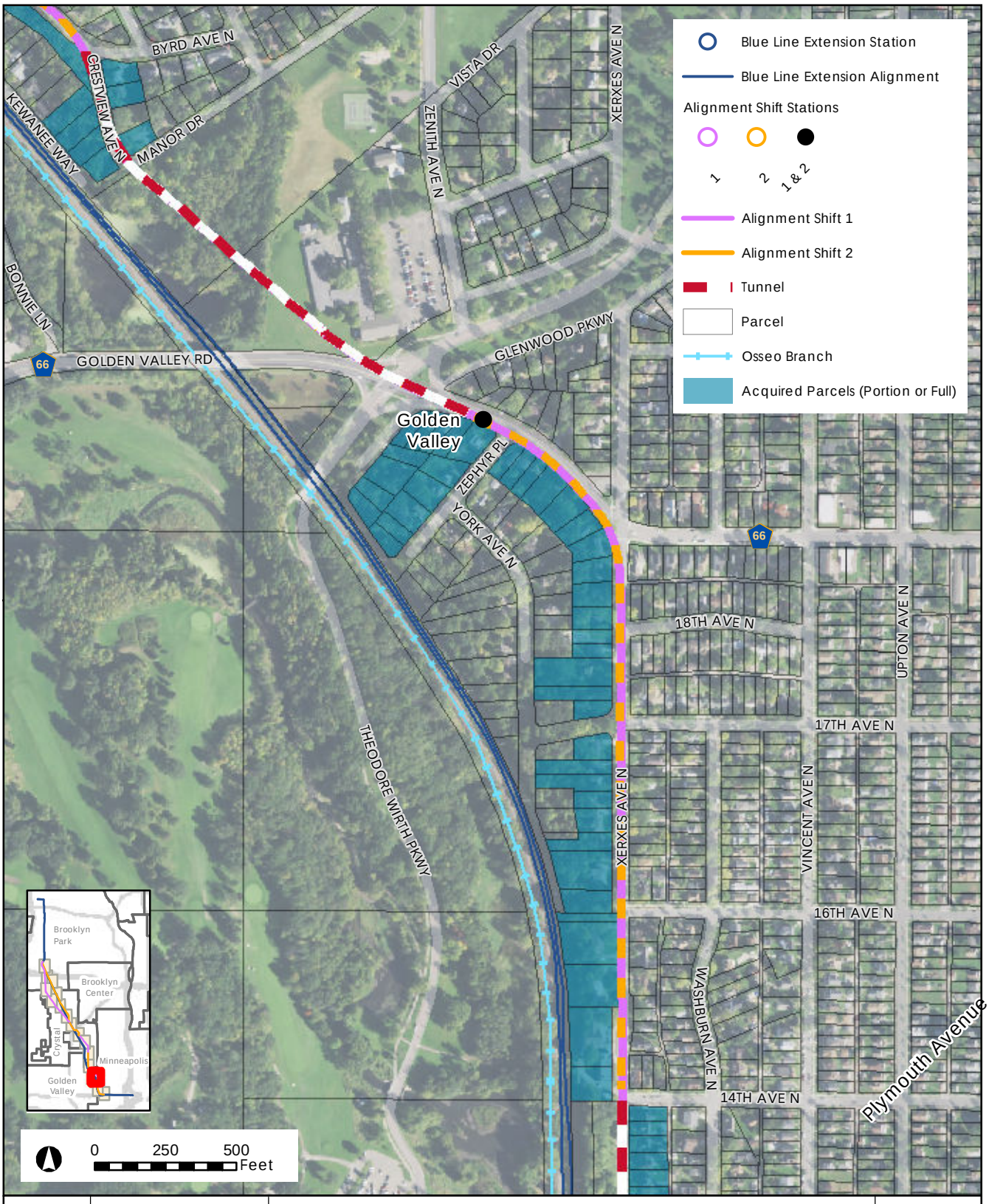

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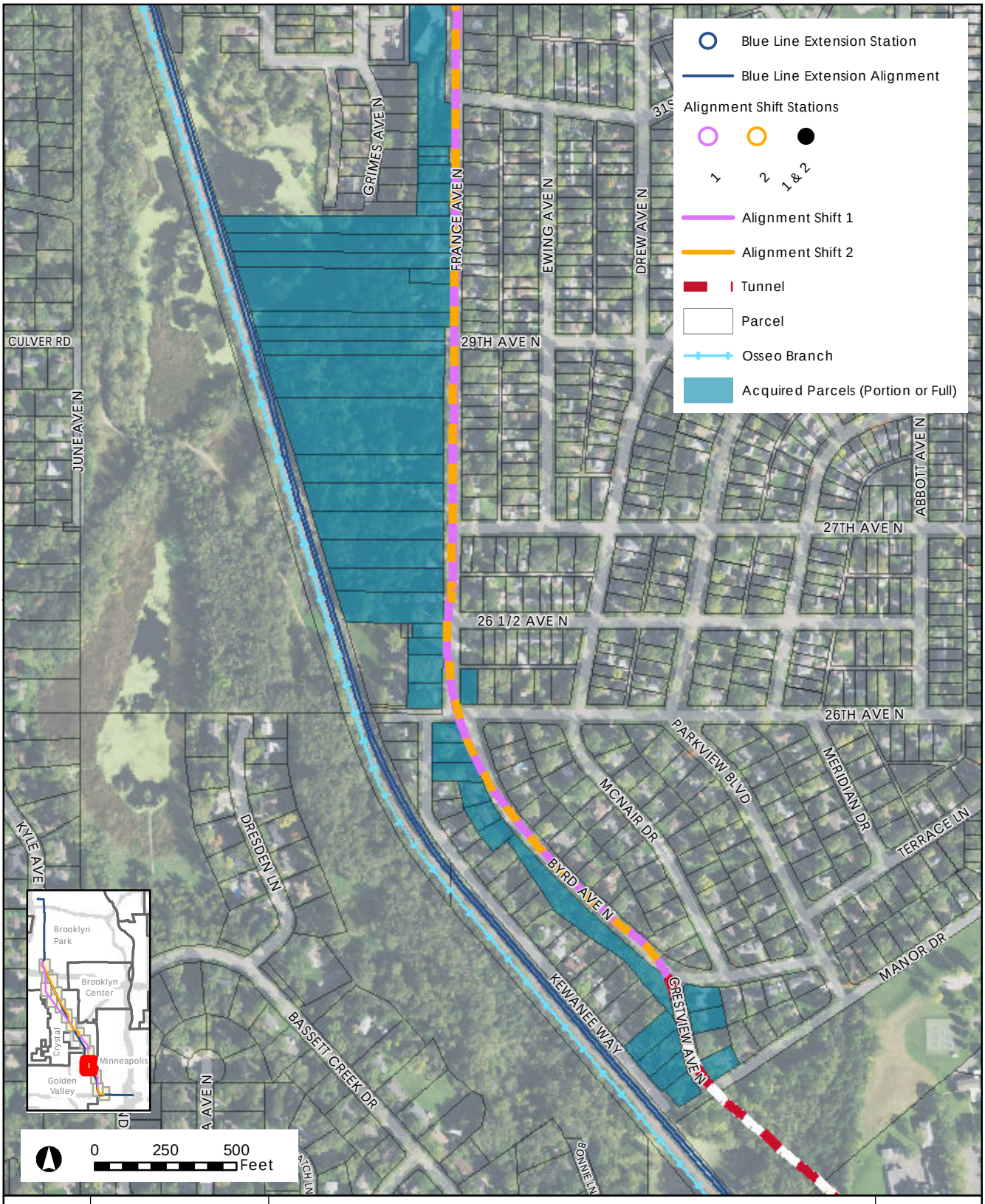

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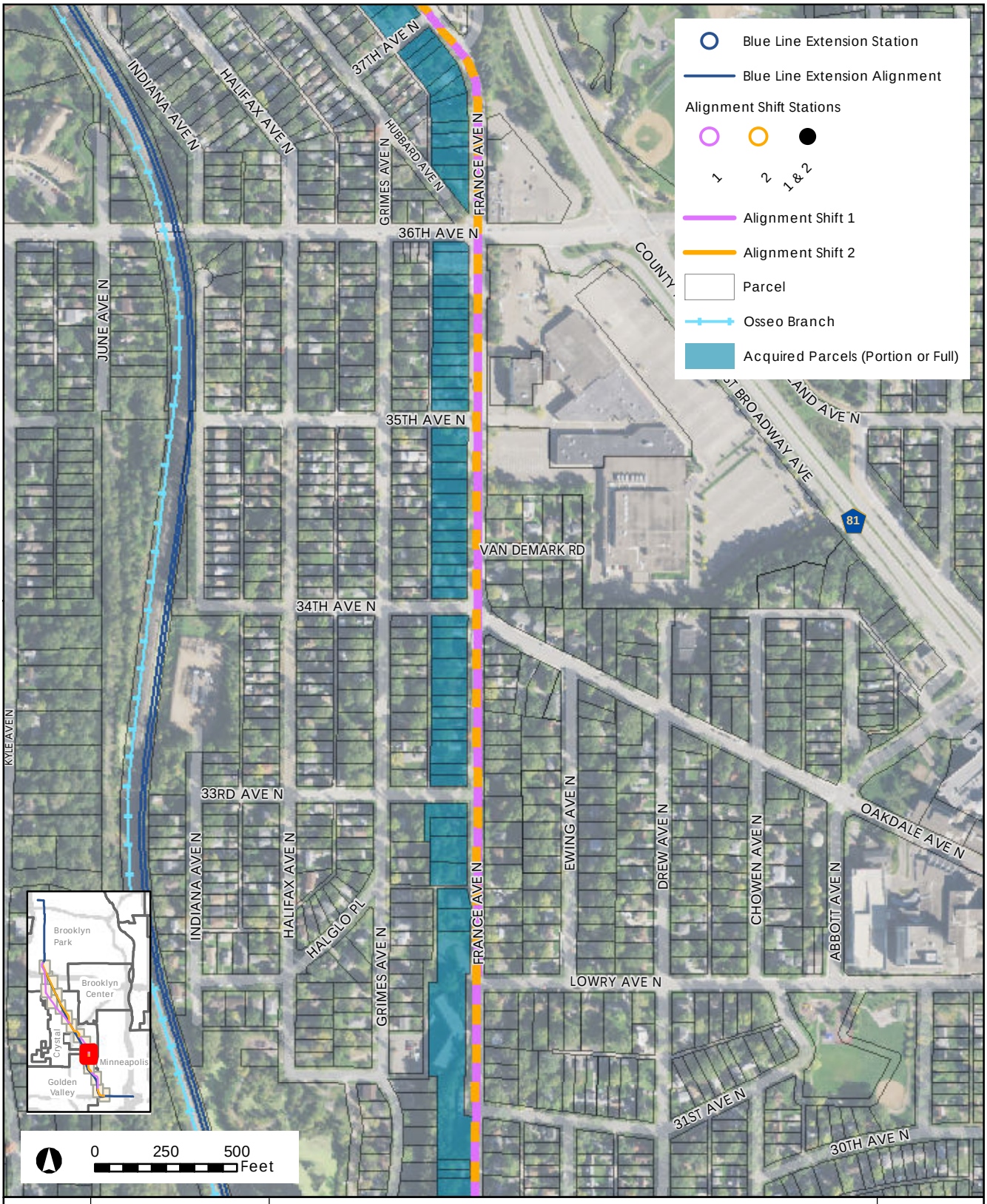

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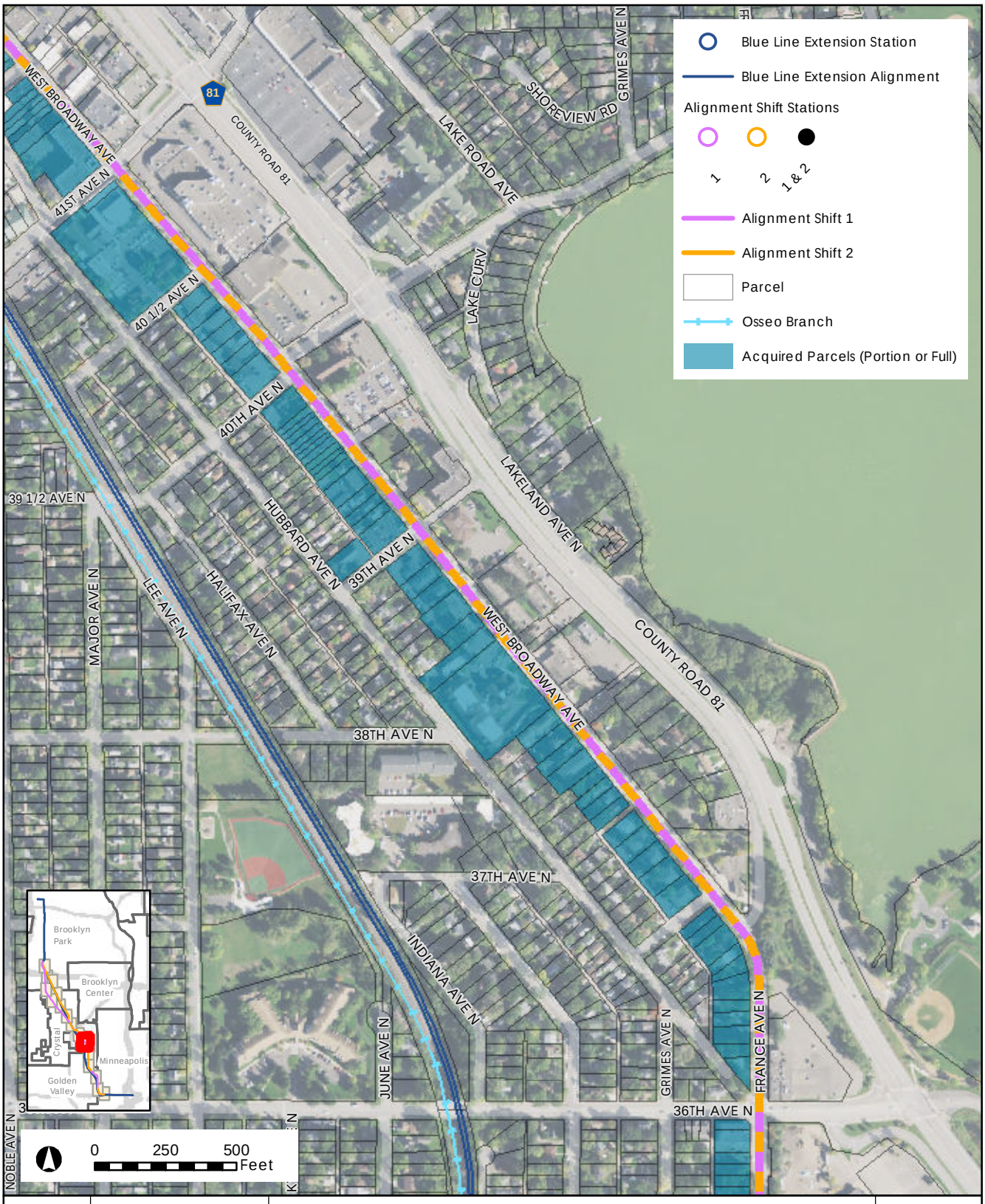

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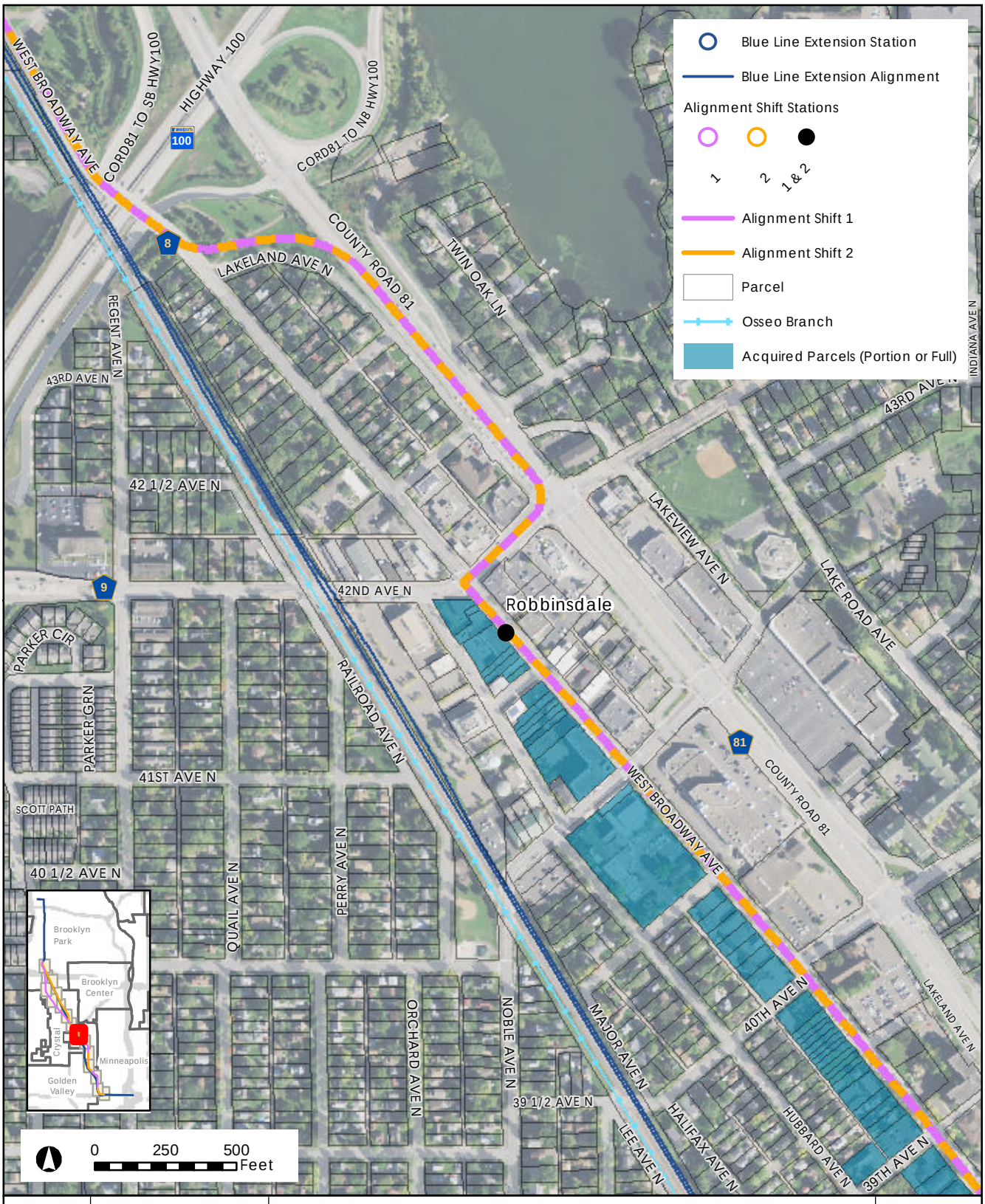

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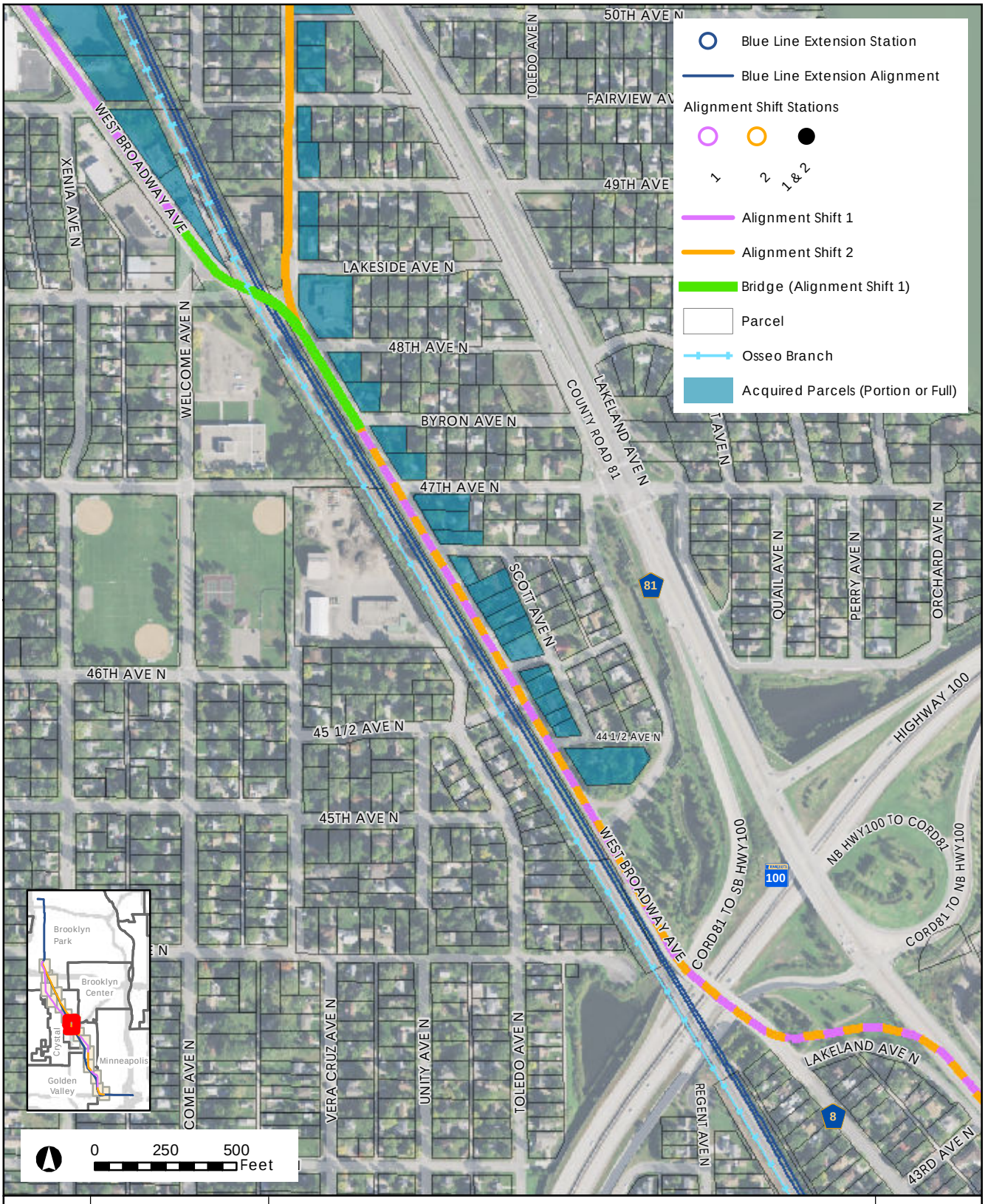

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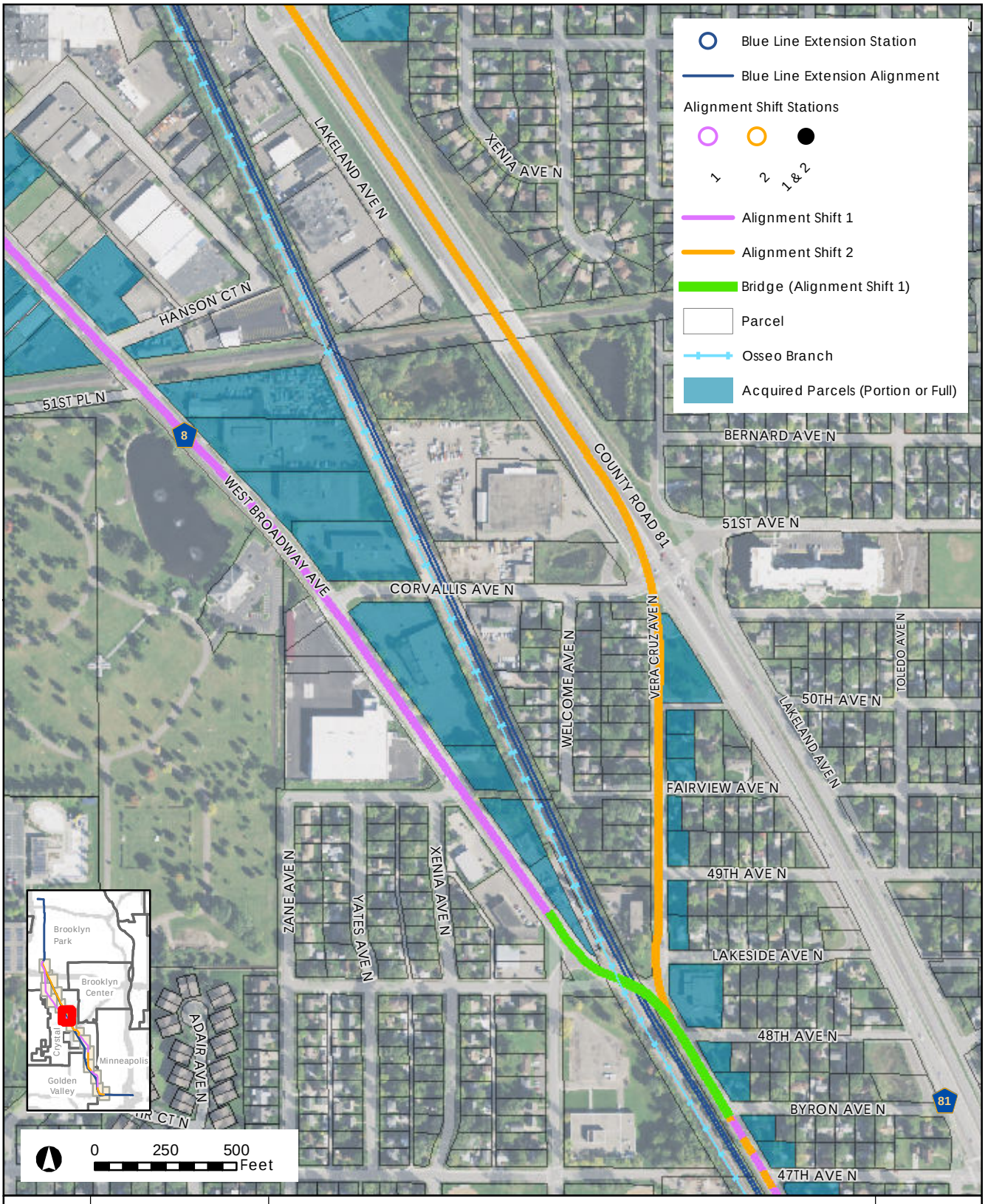

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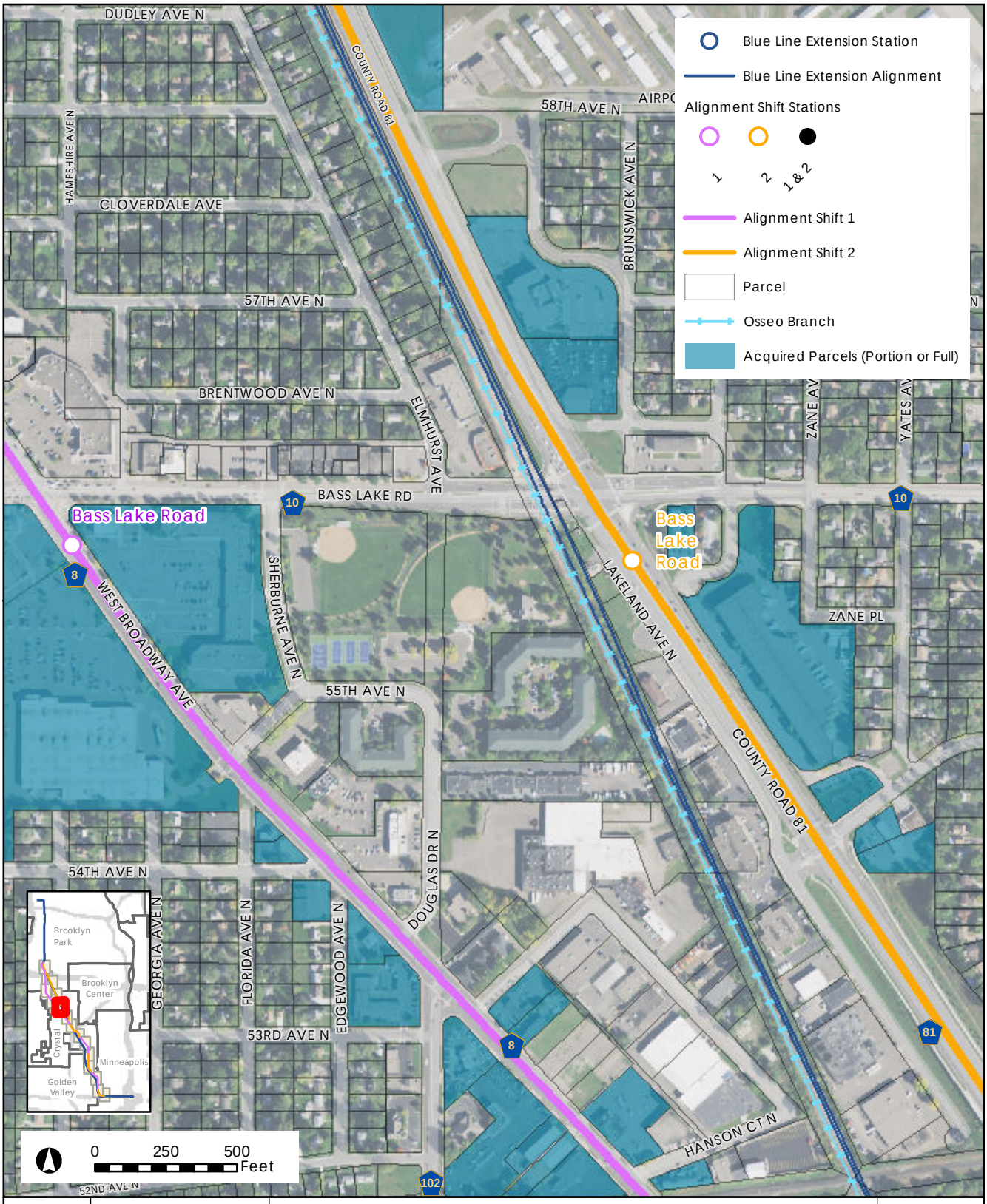

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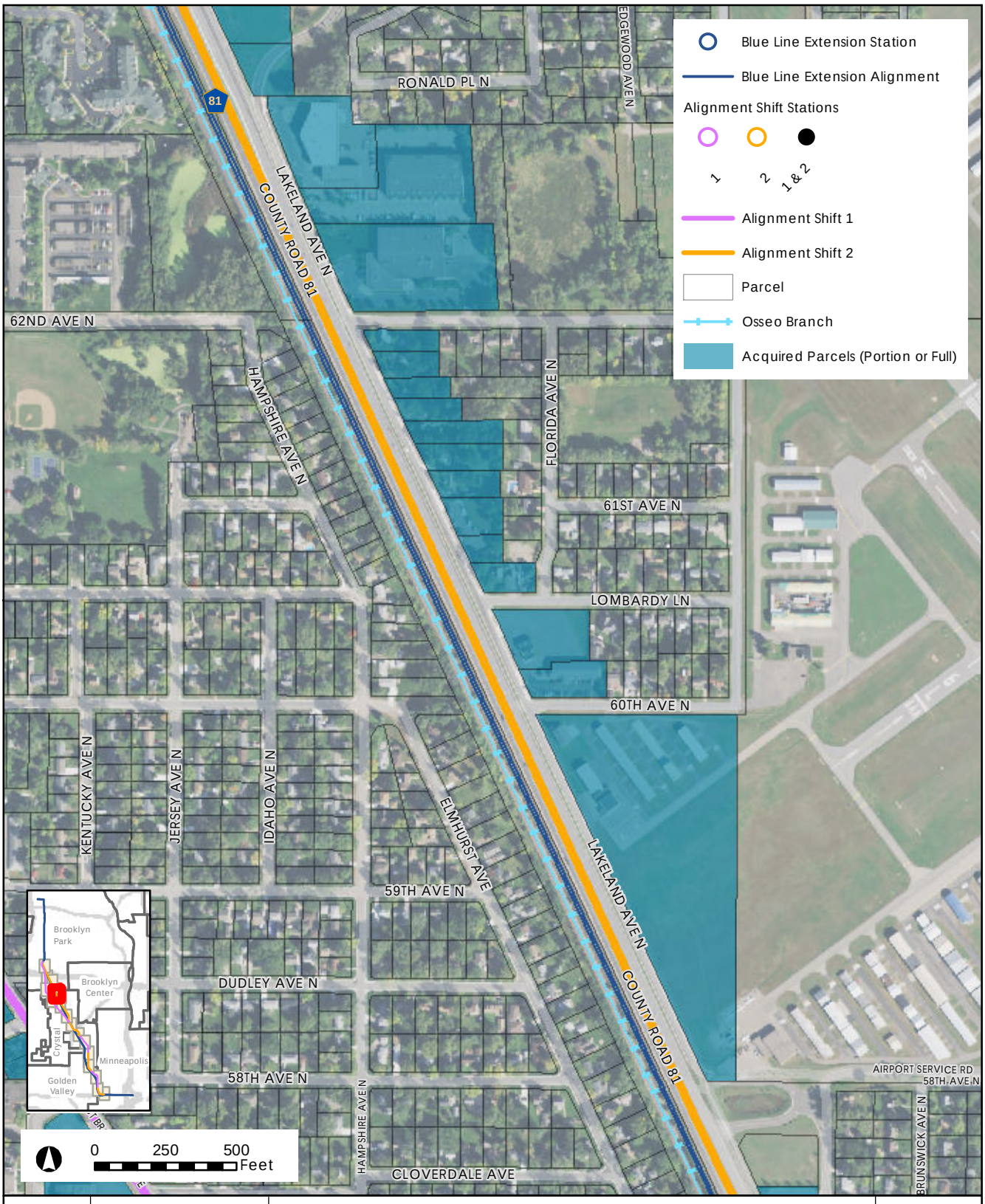

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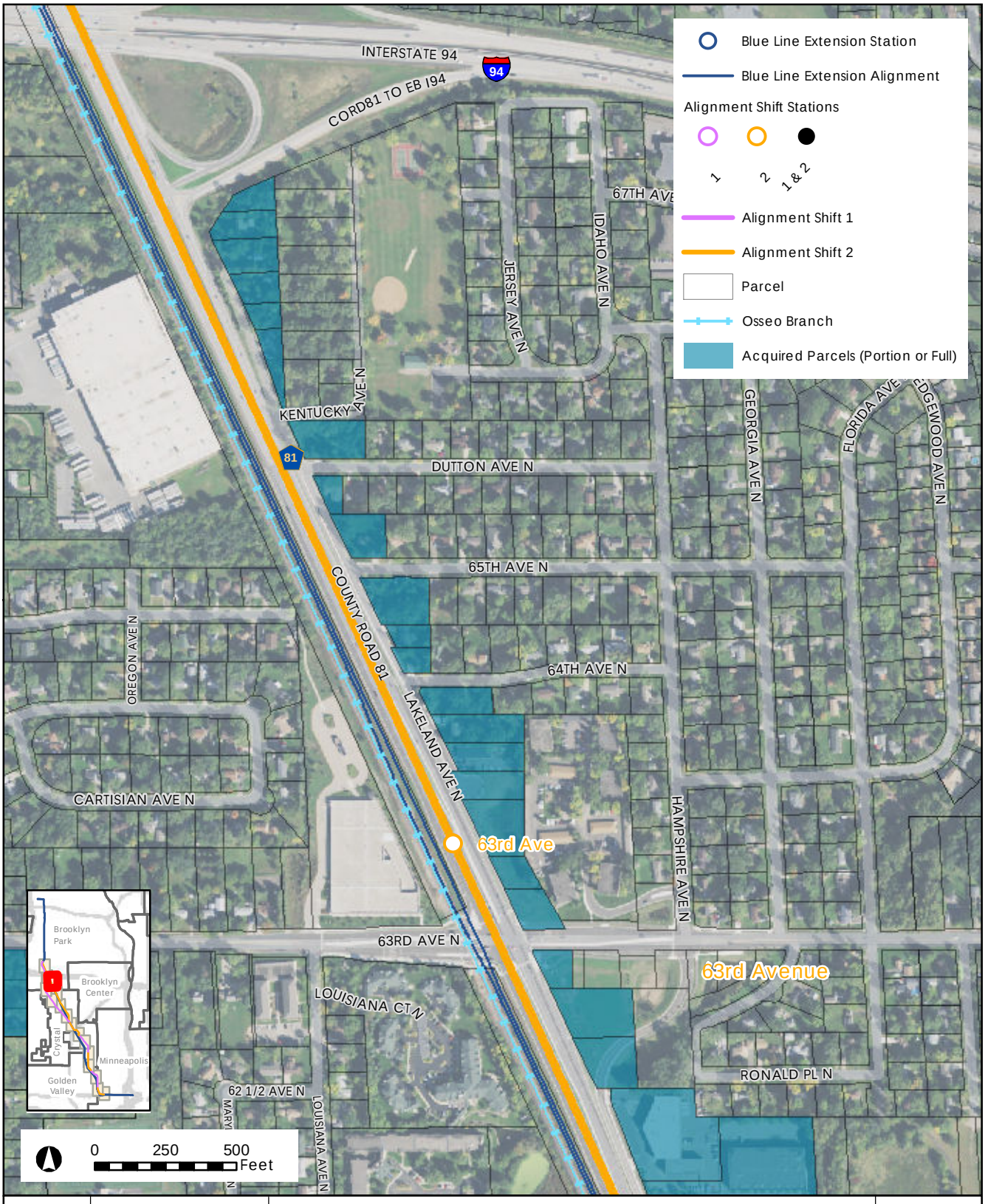

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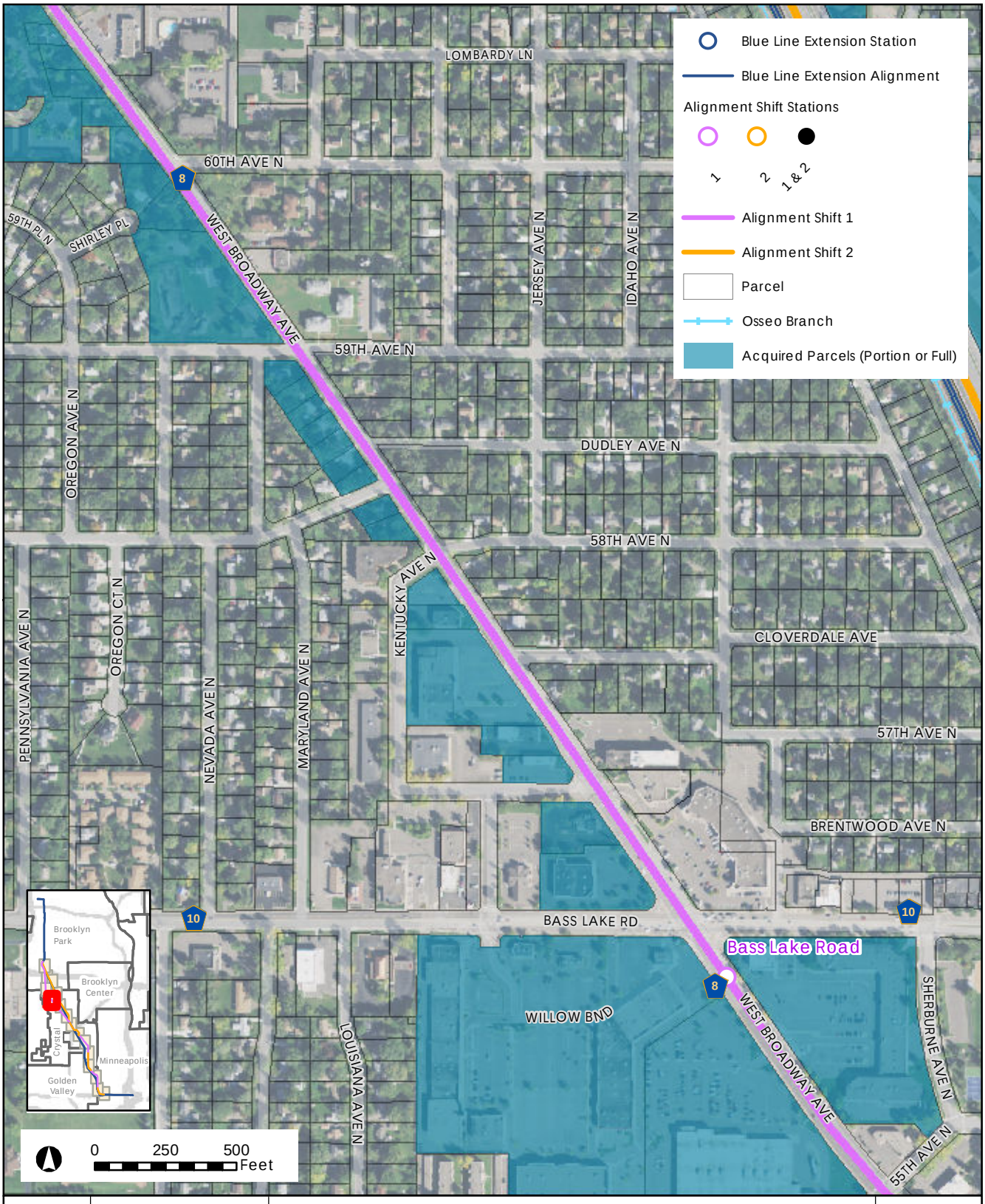

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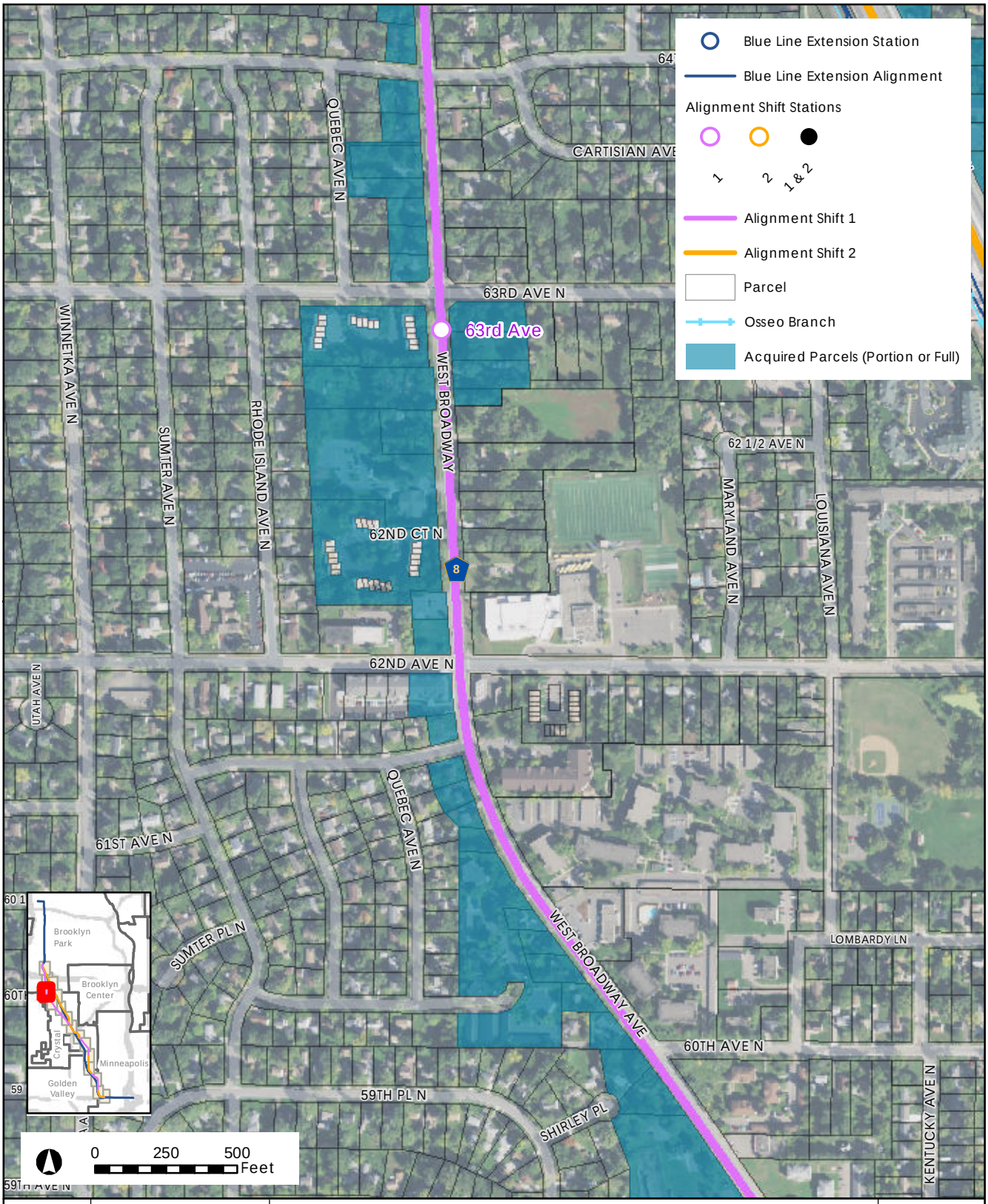

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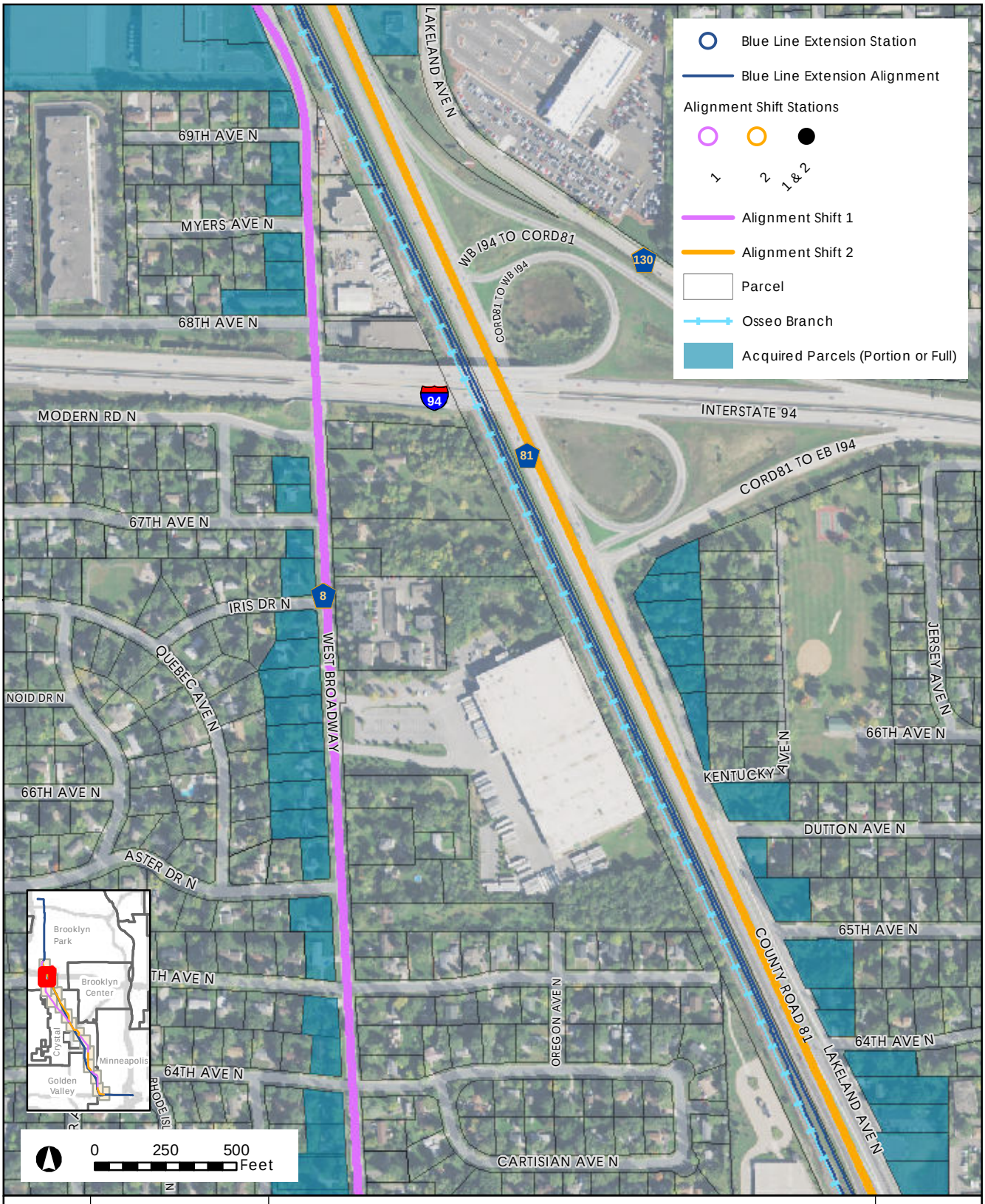

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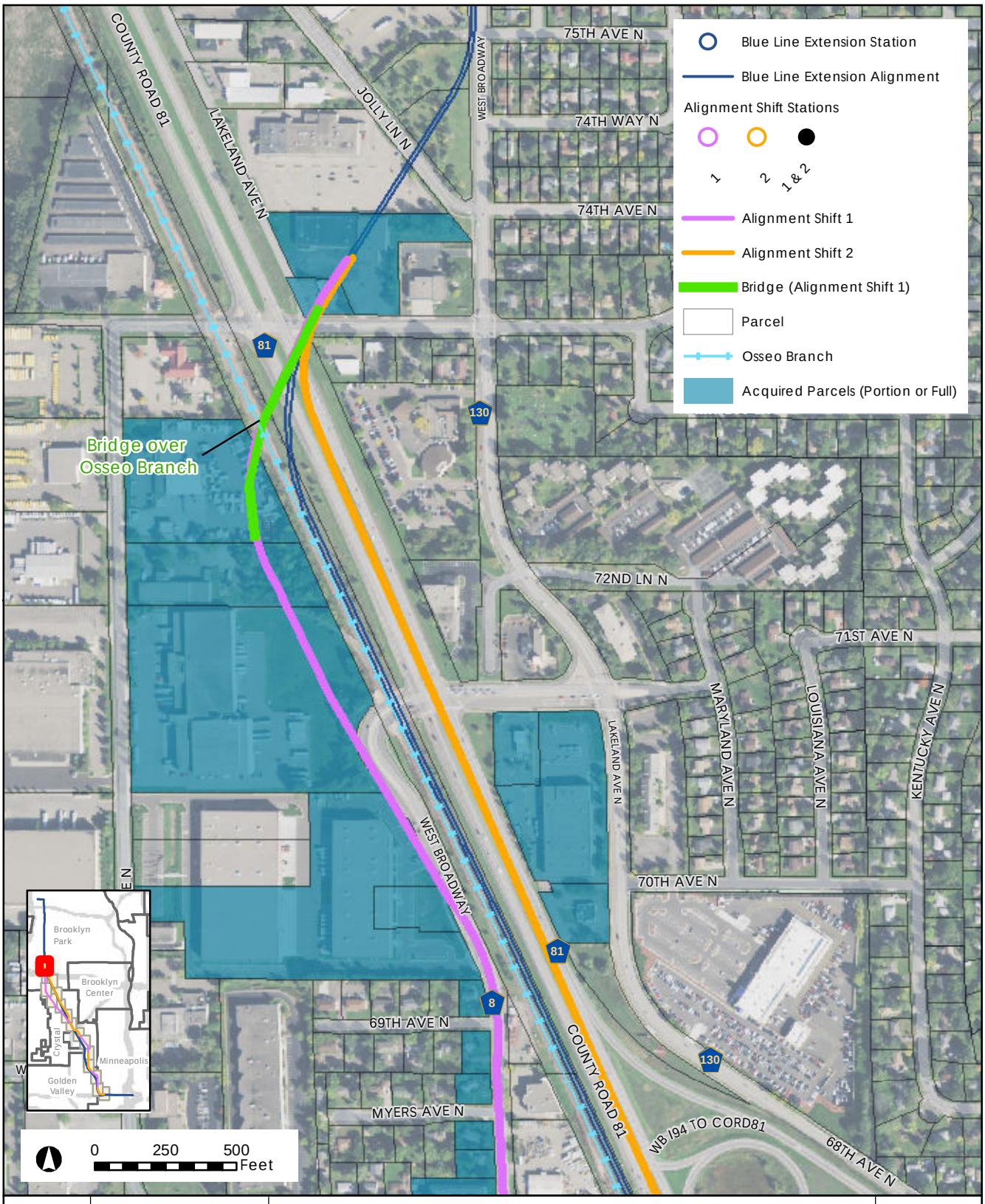

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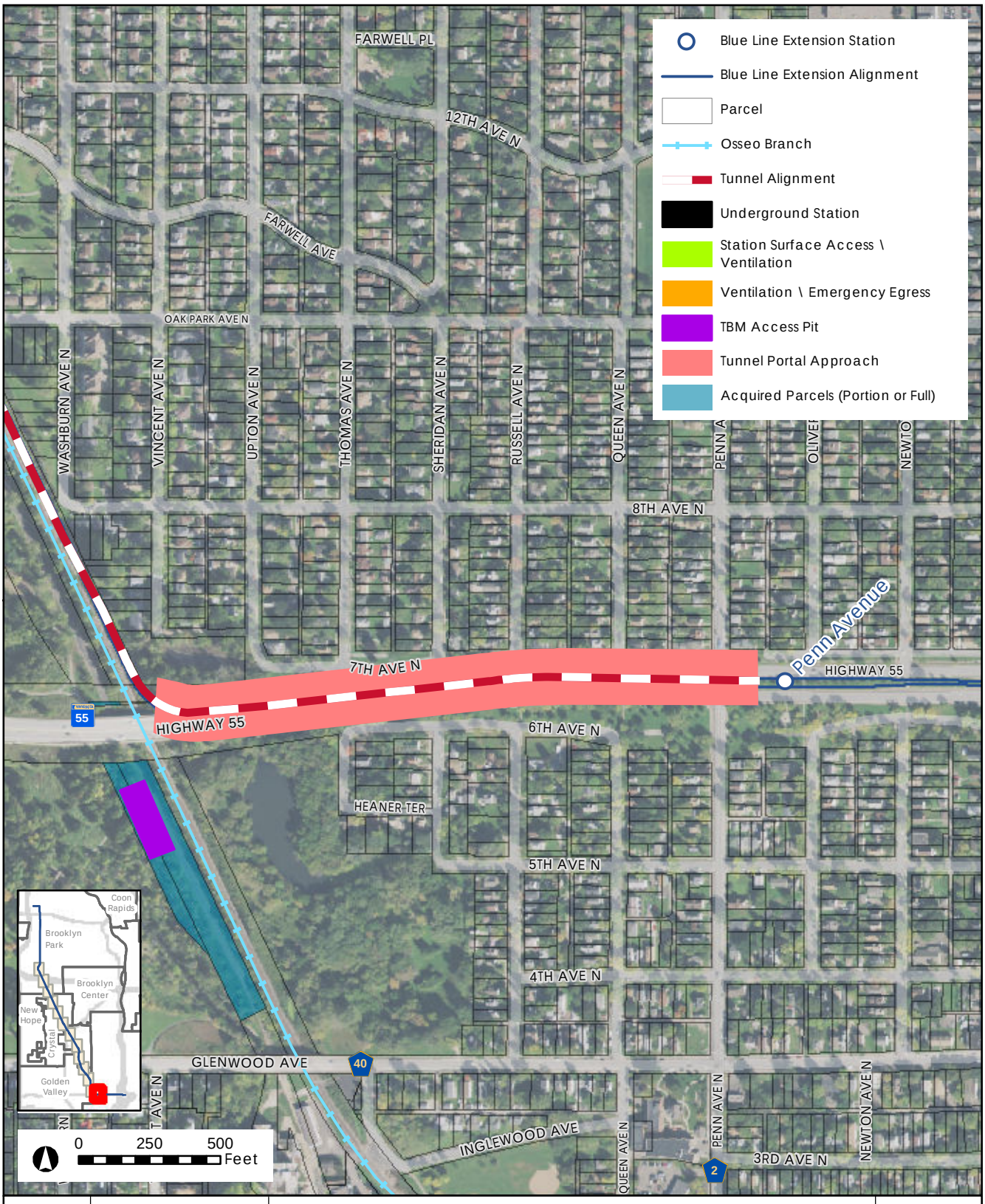

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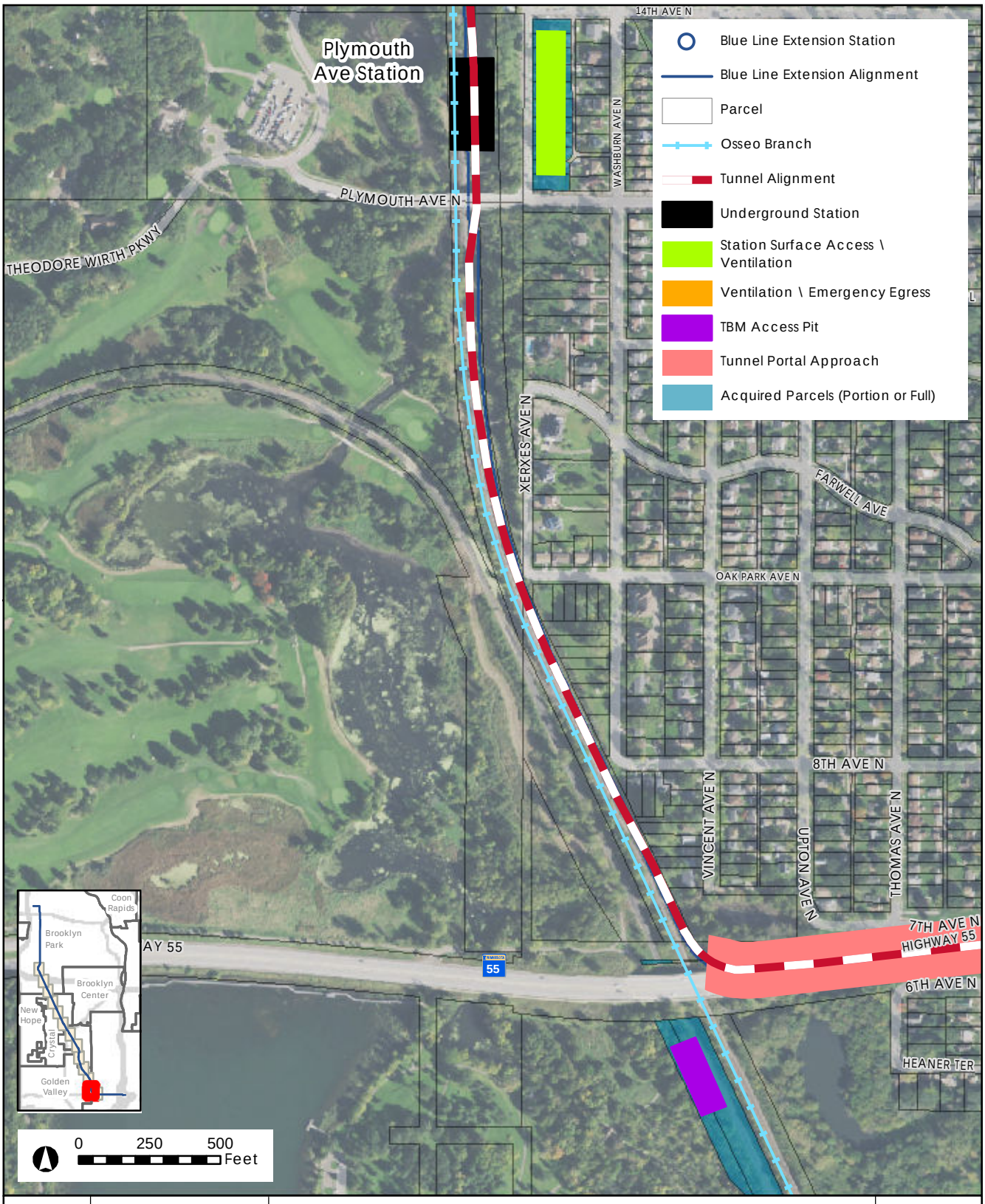

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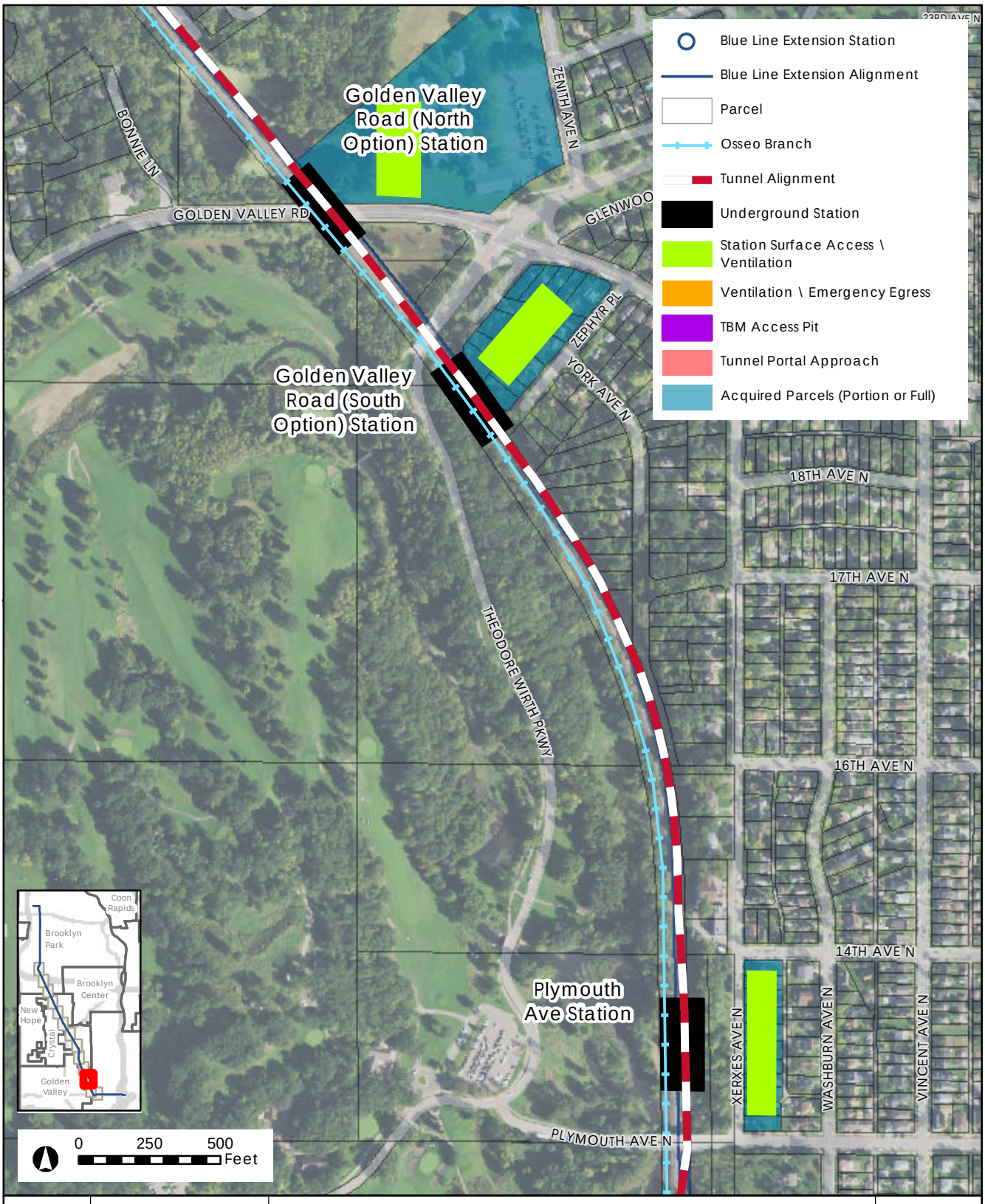

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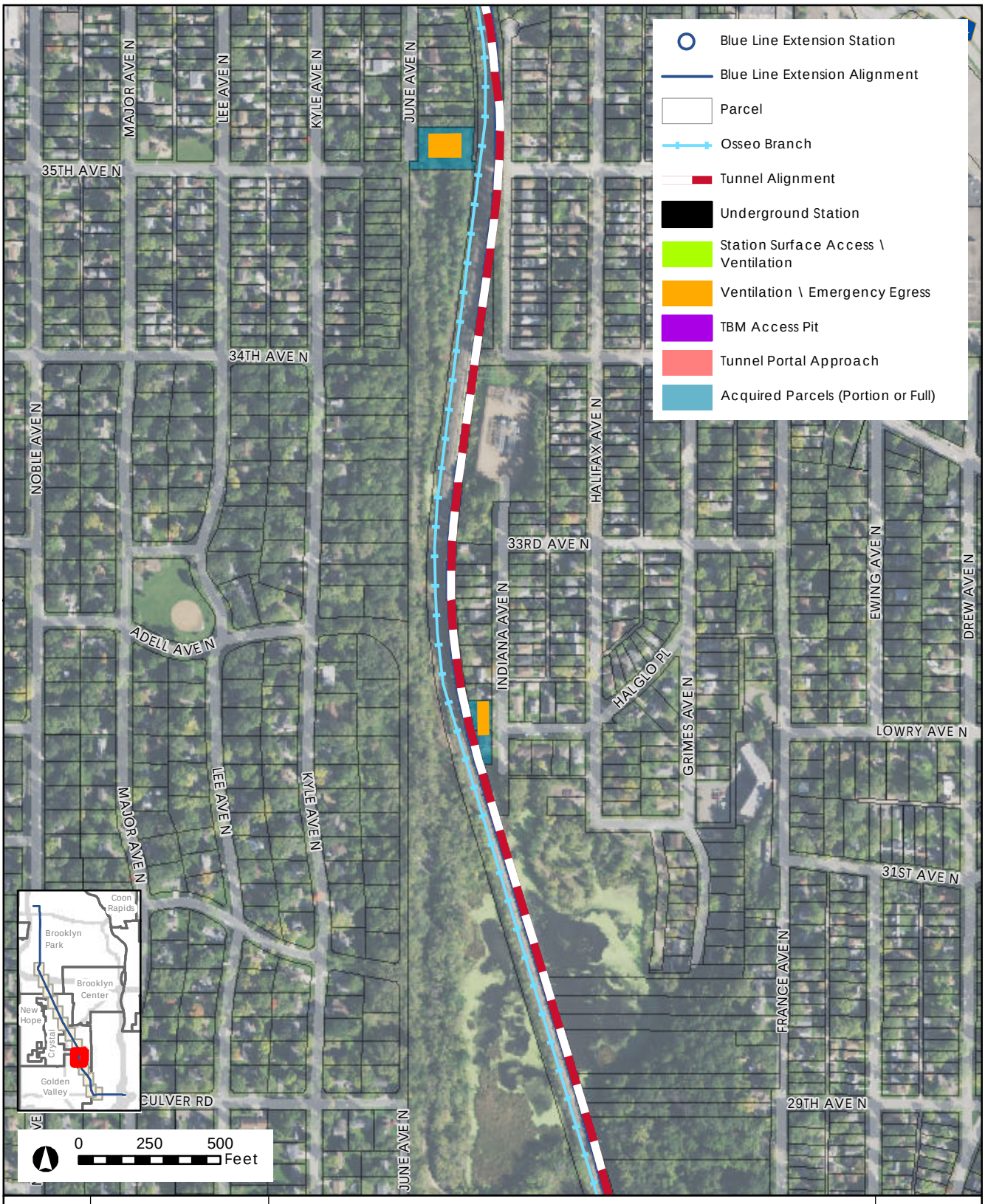

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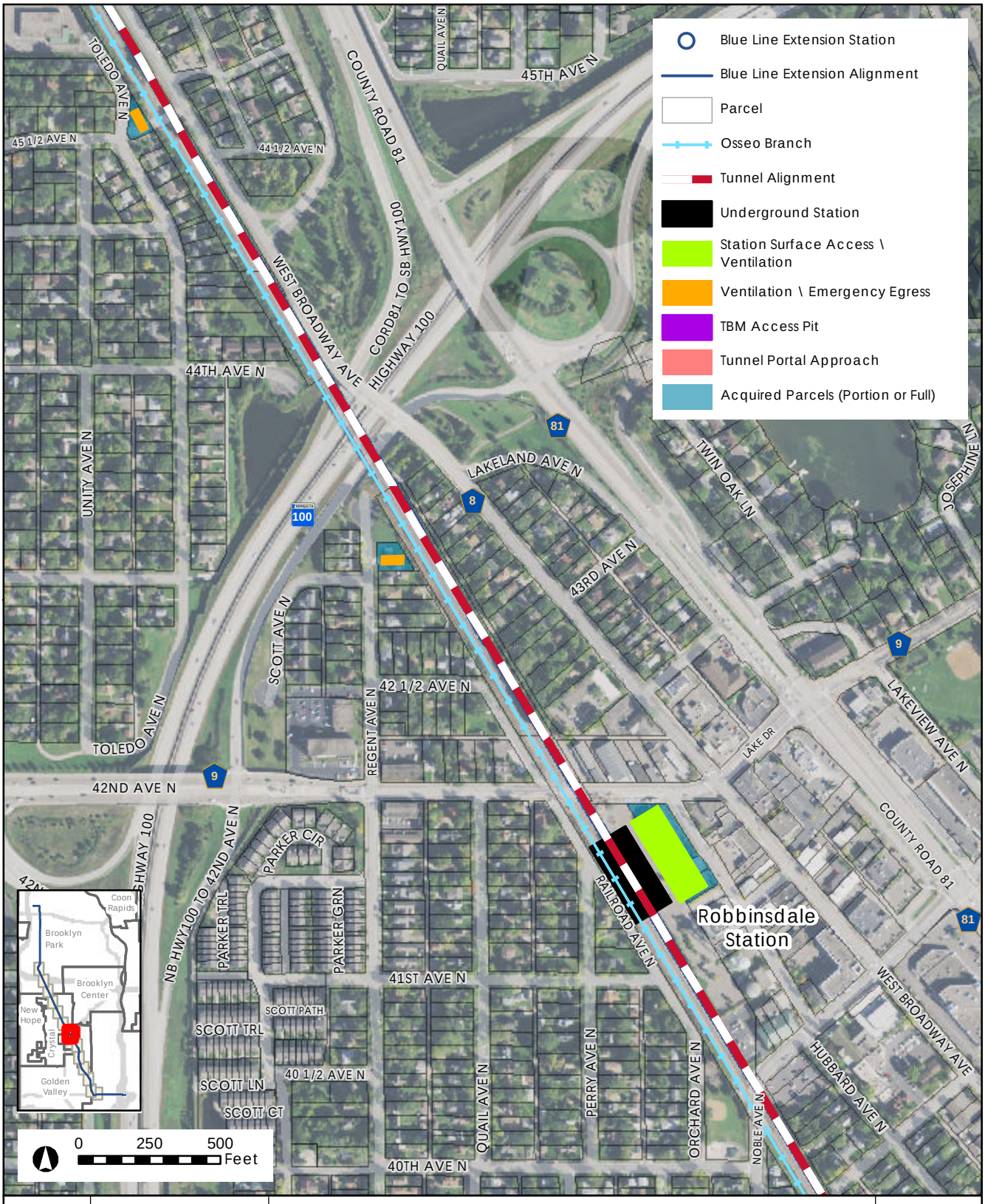

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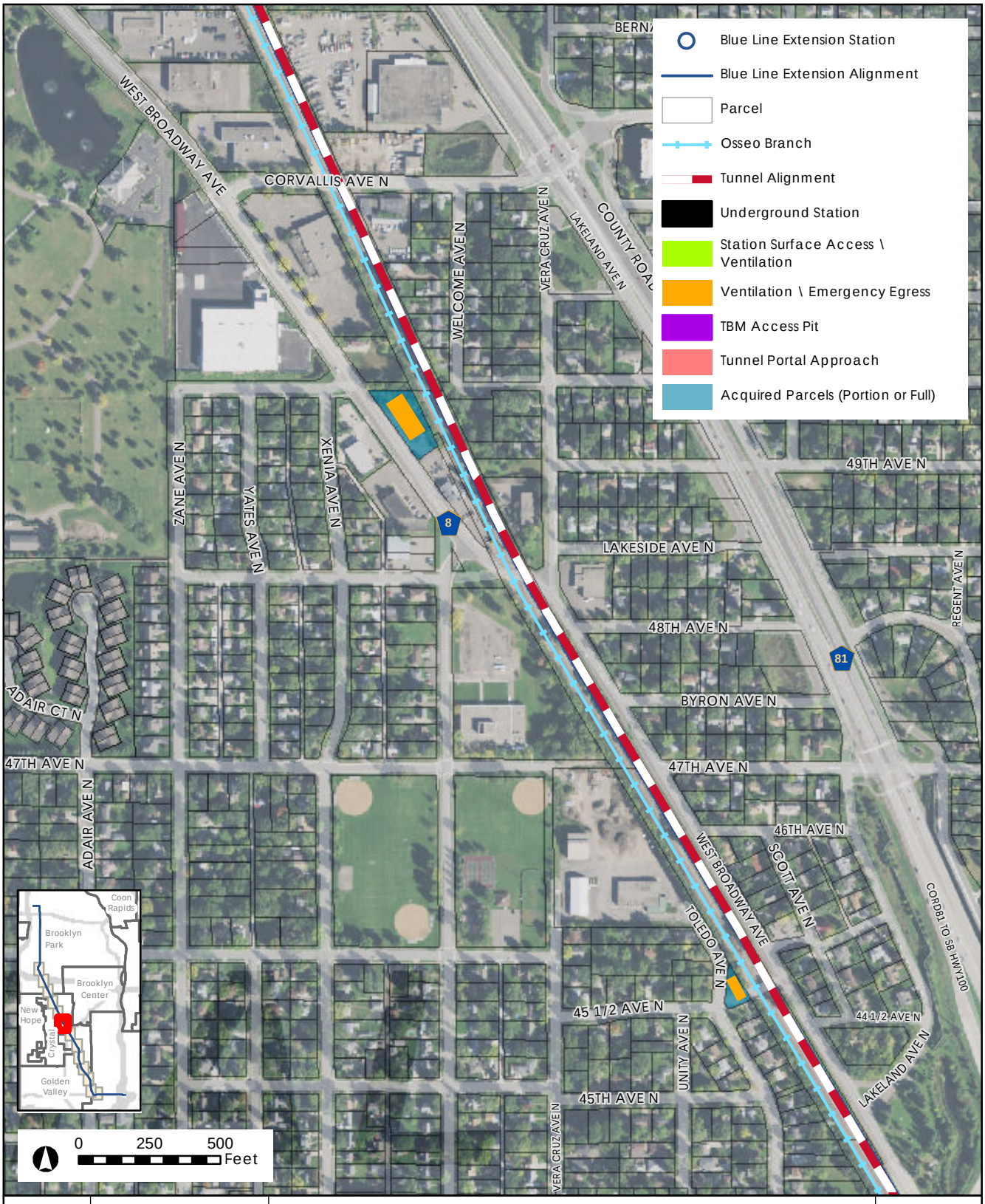

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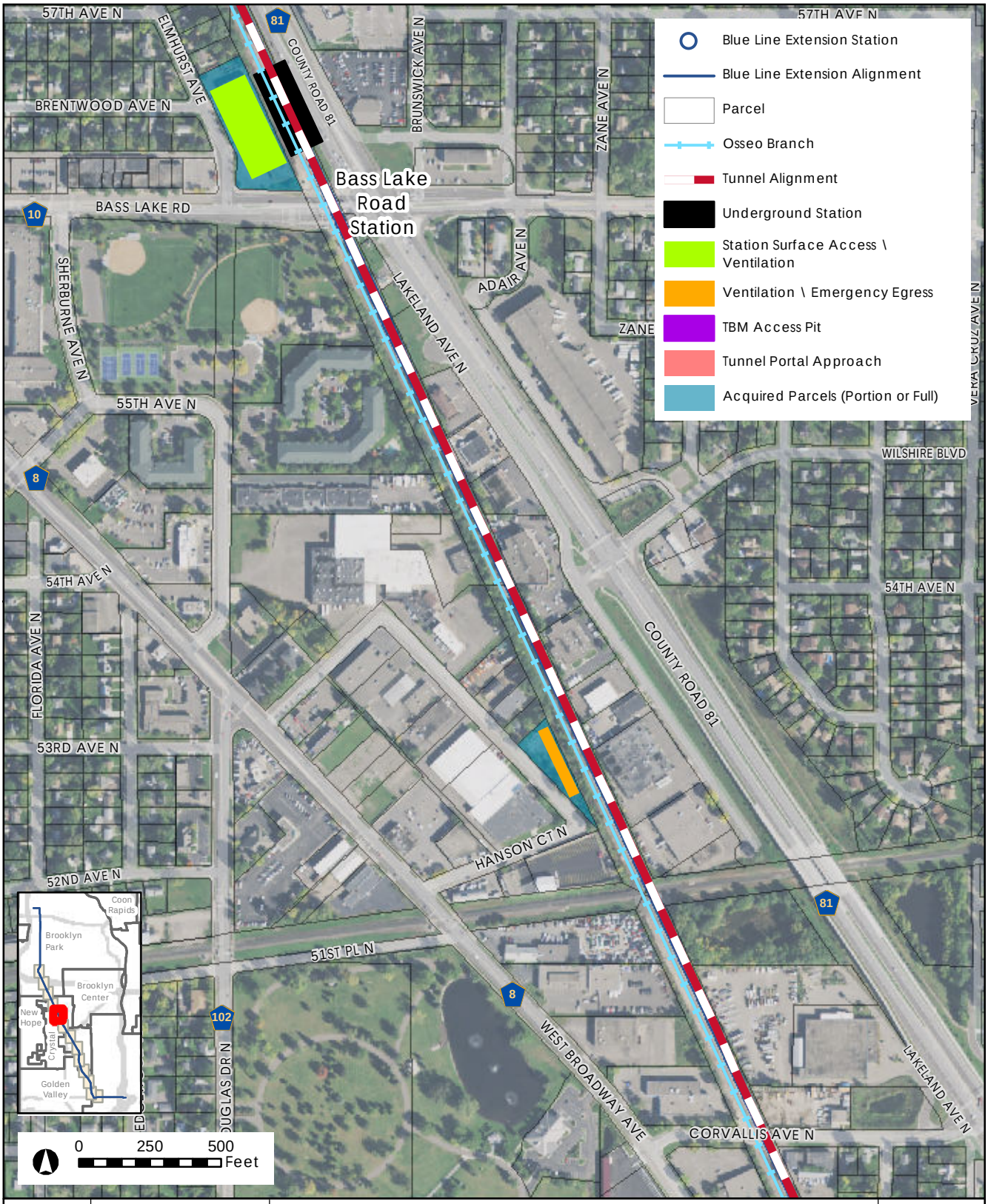

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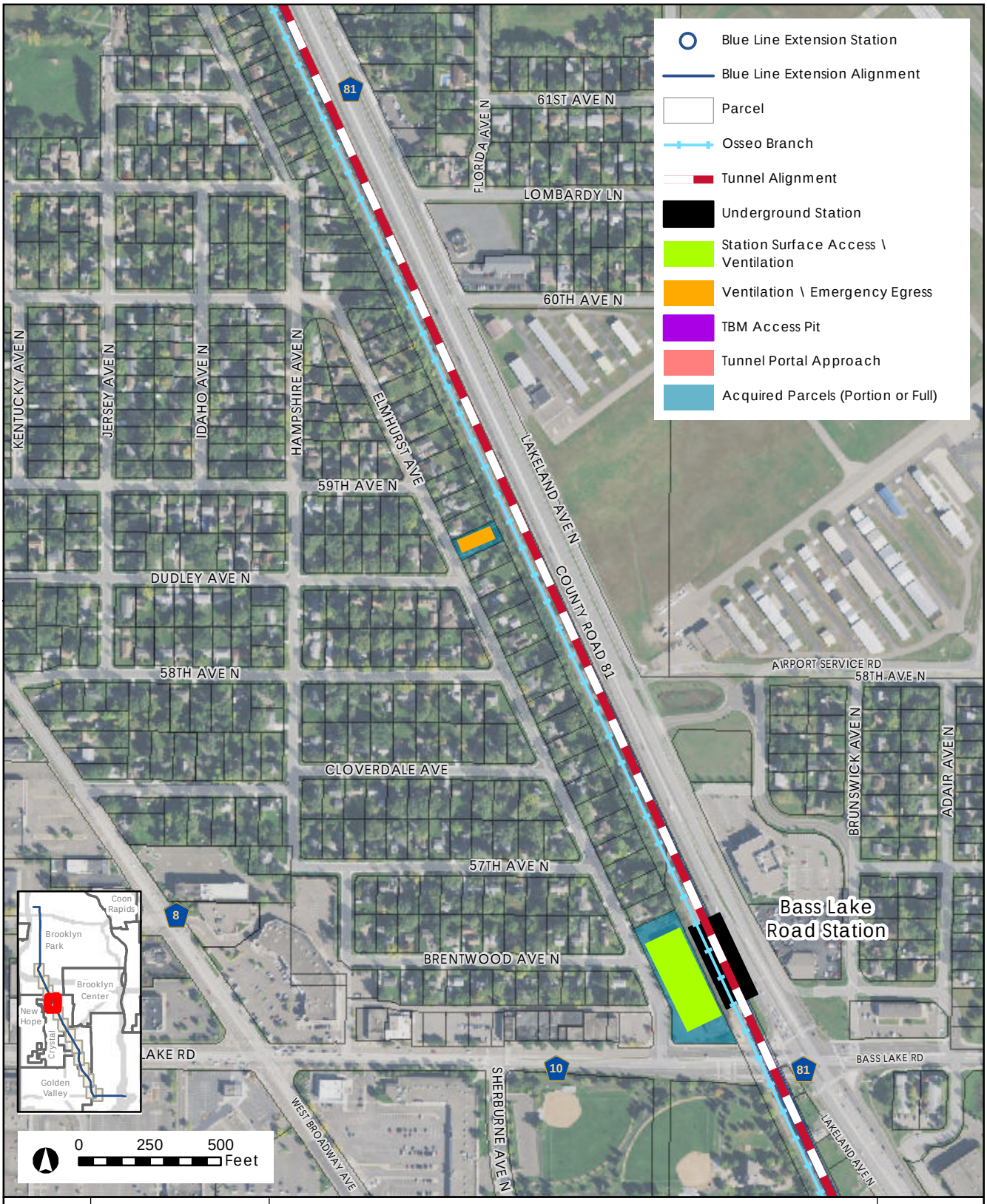

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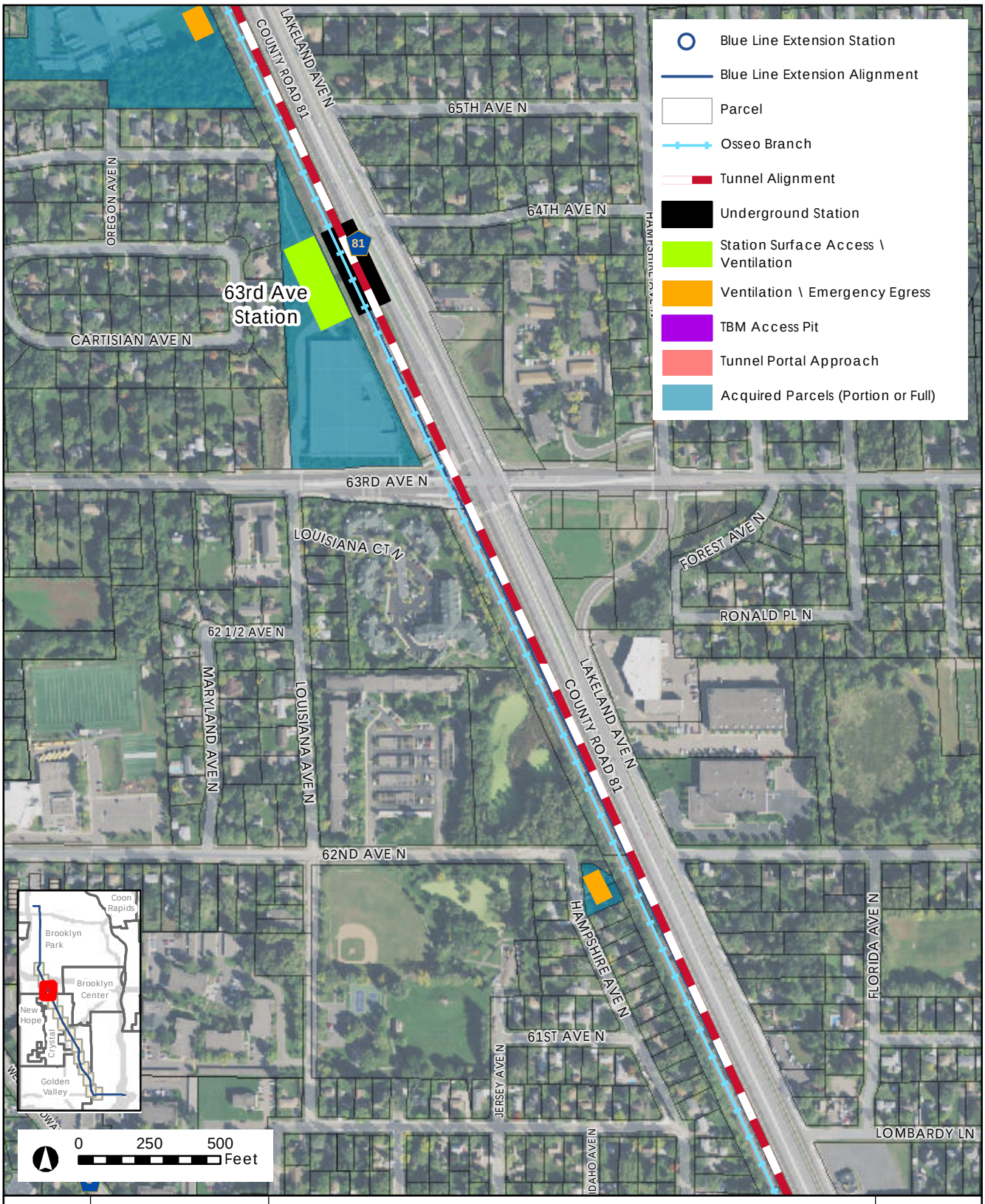

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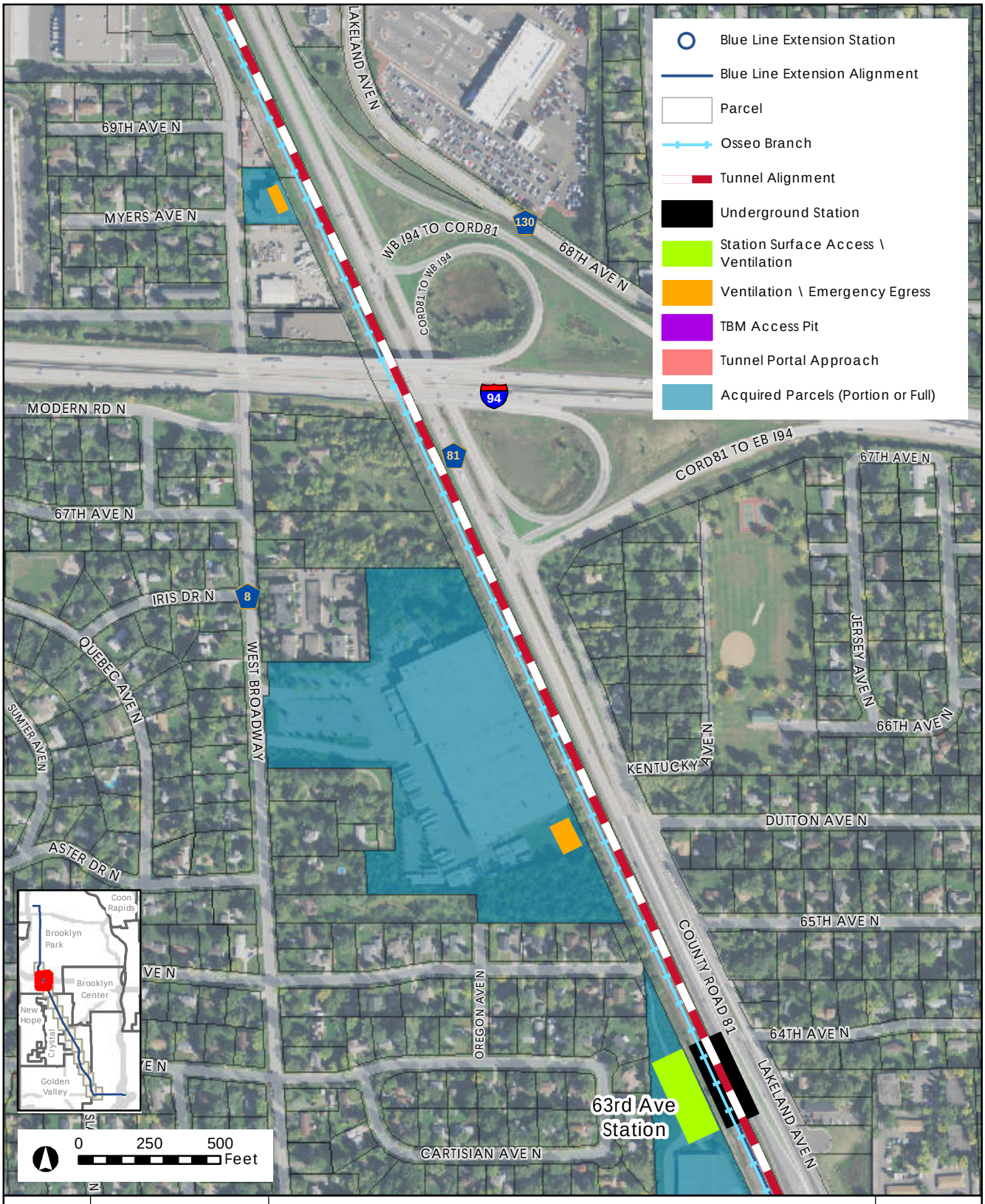

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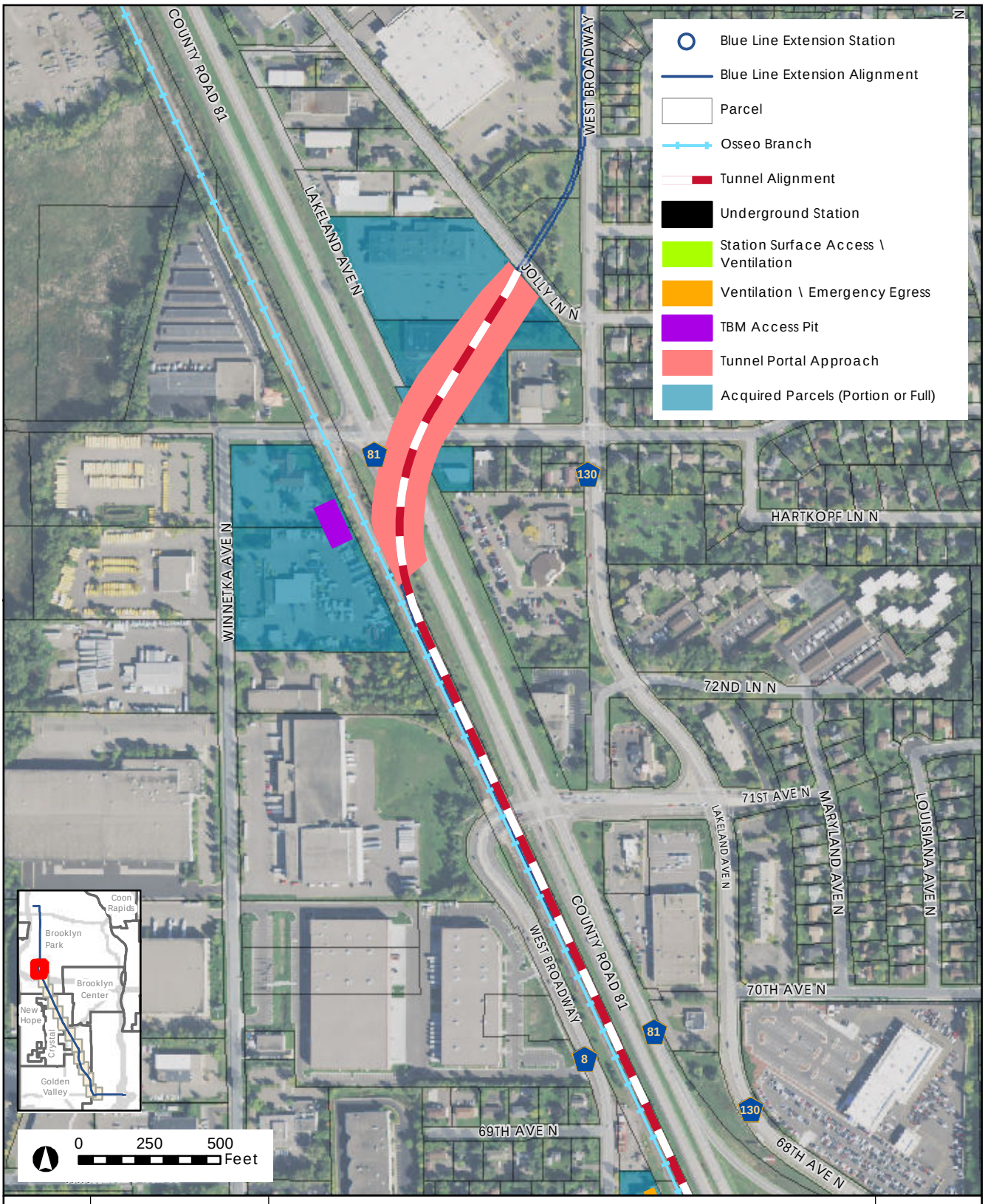

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